

# Search history

Mohamed 10/762927

05/03/2006

=> d his full

(FILE 'HOME' ENTERED AT 08:34:03 ON 03 MAY 2006)

FILE 'CAPLUS' ENTERED AT 08:34:14 ON 03 MAY 2006

E GRIFOLA/CT

E E7+ALL/CT

E E10+ALL/CT

FILE 'STNGUIDE' ENTERED AT 08:35:30 ON 03 MAY 2006

D COST

FILE 'HCAPLUS' ENTERED AT 08:35:43 ON 03 MAY 2006

L1 525 SEA ABB=ON PLU=ON GRIFOLA/OBI  
L2 493 SEA ABB=ON PLU=ON GRIFOLA+NT,OLD,UF/CT  
E MAITAKE+ALL/CT  
L3 92 SEA ABB=ON PLU=ON MAITAKE/OBI  
L4 578 SEA ABB=ON PLU=ON (GRIFOLA OR MAITAKE)/BI  
L5 582 SEA ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4)  
E GLYCOPROTEIN+ALL/CT  
E GLYCO+ALL/CT  
L\*\*\* DEL 582 S L1-L5

FILE 'STNGUIDE' ENTERED AT 08:38:38 ON 03 MAY 2006

FILE 'HCAPLUS' ENTERED AT 08:39:04 ON 03 MAY 2006

L6 1 SEA ABB=ON PLU=ON US200!-762927/APPS  
D SCA  
E GLYCOPROTEINS+ALL/CT  
L7 110962 SEA ABB=ON PLU=ON GLYCOPROTEIN?/OBI  
L8 21998 SEA ABB=ON PLU=ON ANTIDIABETIC?/OBI  
L9 32219 SEA ABB=ON PLU=ON ANTIHYPERTENSIVE?/OBI  
L10 7461 SEA ABB=ON PLU=ON ANTIHYPERTENSIVE?/OBI  
L11 11551 SEA ABB=ON PLU=ON ANTIHYPERTENSIVE?/OBI  
L12 497 SEA ABB=ON PLU=ON ANTIHYPERTENSIVE?/OBI  
L\*\*\* DEL 21 S L5 AND L7  
L13 65053 SEA ABB=ON PLU=ON (L8 OR L9 OR L10 OR L11 OR L12)  
L14 2 SEA ABB=ON PLU=ON L5 AND L7 AND L13  
D SCA  
D IALL L6  
L15 118 SEA ABB=ON PLU=ON ZHUANG C?/AU  
L16 200 SEA ABB=ON PLU=ON KAWAGISHI H?/AU  
L17 500 SEA ABB=ON PLU=ON PREUSS H?/AU  
L18 3 SEA ABB=ON PLU=ON (L15 AND (L16 OR L17)) OR (L16 AND L17)  
D SCA  
L19 21 SEA ABB=ON PLU=ON L5 AND L7  
L20 2 SEA ABB=ON PLU=ON L19 AND (L15 OR L16 OR L17)  
D SCA  
L21 20 SEA ABB=ON PLU=ON L5 AND (L15 OR L16 OR L17)

FILE 'STNGUIDE' ENTERED AT 08:50:54 ON 03 MAY 2006

FILE 'HCAPLUS' ENTERED AT 08:52:33 ON 03 MAY 2006

D SCA L21

L22 11582 SEA ABB=ON PLU=ON HYPOLIPEM?/OBI  
L23 62013 SEA ABB=ON PLU=ON HYPERTENS?/OBI  
L24 50378 SEA ABB=ON PLU=ON BLOOD PRESS?/OBI  
L25 30252 SEA ABB=ON PLU=ON OBES?/OBI  
L26 23975 SEA ABB=ON PLU=ON BODY WEIGHT/OBI  
L27 14852 SEA ABB=ON PLU=ON BIOACTIV?/OBI

L28 169554 SEA ABB=ON PLU=ON (L22 OR L23 OR L24 OR L25 OR L26 OR L27)  
 L29 23 SEA ABB=ON PLU=ON L28 AND L5  
 L\*\*\* DEL 22 S L29 NOT L19  
 L30 1 SEA ABB=ON PLU=ON L29 AND L7  
 E GLYCOPROTEINS+ALL/CT

FILE 'STNGUIDE' ENTERED AT 09:00:56 ON 03 MAY 2006

L\*\*\* DEL 5 S ?PROTEIN?/BI

FILE 'HCAPLUS' ENTERED AT 09:01:34 ON 03 MAY 2006

L31 2391101 SEA ABB=ON PLU=ON ?PROTEIN?/BI  
 L\*\*\* DEL 101341 S ?SACCHAR?  
 L32 357876 SEA ABB=ON PLU=ON ?SACCHAR?/BI  
 L33 11 SEA ABB=ON PLU=ON (L31 OR L32) AND L29  
 D SCA  
 L34 25 SEA ABB=ON PLU=ON L5 AND L13  
 L35 36 SEA ABB=ON PLU=ON L29 OR L34  
 L36 55 SEA ABB=ON PLU=ON L35 OR L19  
 L37 118968 SEA ABB=ON PLU=ON L31 AND L32  
 L38 3 SEA ABB=ON PLU=ON L37 AND L35  
 D SCA  
 L39 33 SEA ABB=ON PLU=ON L35 NOT L38  
 L40 44 SEA ABB=ON PLU=ON L5 AND L31 AND L32  
 L41 92355 SEA ABB=ON PLU=ON L31 (L) L32  
 L42 36 SEA ABB=ON PLU=ON L5 AND L41  
 D SCA

FILE 'STNGUIDE' ENTERED AT 09:17:23 ON 03 MAY 2006

FILE 'HCAPLUS' ENTERED AT 09:18:22 ON 03 MAY 2006

L43 55 SEA ABB=ON PLU=ON GLYCO PROTEIN?/OBI  
 L44 3 SEA ABB=ON PLU=ON L5 AND L43  
 D SCA  
 L45 311375 SEA ABB=ON PLU=ON EXTRACT?/OBI  
 L46 0 SEA ABB=ON PLU=ON L44 AND L45  
 L47 1093132 SEA ABB=ON PLU=ON EXTRACT?/BI  
 L48 0 SEA ABB=ON PLU=ON L47 AND L44  
 L49 13 SEA ABB=ON PLU=ON L19 AND L47  
 L50 214354 SEA ABB=ON PLU=ON ETHANOL?/OBI  
 L51 279379 SEA ABB=ON PLU=ON ETHANOL?/BI  
 L52 31588 SEA ABB=ON PLU=ON ETHYL ALCOHOL?/OBI  
 L53 34574 SEA ABB=ON PLU=ON ETHYL ALCOHOL?/BI  
 L54 2 SEA ABB=ON PLU=ON (L50 OR L51 OR L52 OR L53) AND (L19 OR  
 L49)  
 L55 21 SEA ABB=ON PLU=ON L40 AND L47  
 L56 12 SEA ABB=ON PLU=ON L55 NOT L19  
 D SCA  
 L57 5 SEA ABB=ON PLU=ON L56 AND (L50 OR L51 OR L52 OR L53)  
 L58 6 SEA ABB=ON PLU=ON L5 AND L27  
 D SCA  
 L59 650480 SEA ABB=ON PLU=ON PURIF?/OBI OR ISOLAT?/OBI  
 L60 3 SEA ABB=ON PLU=ON (L59 OR L47) AND L58  
 D SCA  
 L61 6 SEA ABB=ON PLU=ON L55 AND (L50 OR L51 OR L52 OR L53)  
 L62 994 SEA ABB=ON PLU=ON L7 AND ((L8 OR L9 OR L10 OR L11 OR L12) OR  
 (L22 OR L23 OR L24 OR L25 OR L26))  
 L\*\*\* DEL 107 S L7 AND (L8-L12 OR L22-L26) AND L37  
 L63 307 SEA ABB=ON PLU=ON L7 (L) ((L8 OR L9 OR L10 OR L11 OR L12) OR  
 (L22 OR L23 OR L24 OR L25 OR L26))  
 L64 7100 SEA ABB=ON PLU=ON L7 (L) THU/RL

L65 18 SEA ABB=ON PLU=ON L64 (L) ((L8 OR L9 OR L10 OR L11 OR L12)  
 OR (L22 OR L23 OR L24 OR L25 OR L26))  
 L66 91828 SEA ABB=ON PLU=ON GLYCOPROTEIN?/CW  
 L67 4489 SEA ABB=ON PLU=ON L66 (L) THU/RL  
 L68 157 SEA ABB=ON PLU=ON L67 AND ((L8 OR L9 OR L10 OR L11 OR L12)  
 OR (L22 OR L23 OR L24 OR L25 OR L26))  
 L69 11 SEA ABB=ON PLU=ON L67 (L) ((L8 OR L9 OR L10 OR L11 OR L12)  
 OR (L22 OR L23 OR L24 OR L25 OR L26))  
 D SCA  
 L70 3 SEA ABB=ON PLU=ON L43 (L) THU/RL  
 L71 0 SEA ABB=ON PLU=ON L70 AND ((L8 OR L9 OR L10 OR L11 OR L12)  
 OR (L22 OR L23 OR L24 OR L25 OR L26))  
 L72 7 SEA ABB=ON PLU=ON L65 NOT L69  
 D SCA

FILE 'MEDLINE' ENTERED AT 09:44:00 ON 03 MAY 2006

D COST

L73 104 SEA ABB=ON PLU=ON GRIFOLA  
 L74 13 SEA ABB=ON PLU=ON GRIFOLA+NT/CT  
 L75 54 SEA ABB=ON PLU=ON MAITAKE  
 L76 118 SEA ABB=ON PLU=ON (L73 OR L74 OR L75)  
 L77 176797 SEA ABB=ON PLU=ON ?GLYCOPROTEIN?  
 L78 457076 SEA ABB=ON PLU=ON GLYCOPROTEINS+NT/CT  
 L79 10 SEA ABB=ON PLU=ON L76 AND (L77 OR L78)  
 D TRIAL 1-10  
 L\*\*\* DEL 269229 S ?DIABET?  
 D TRIAL 1-3  
 D TRIAL 500-503  
 D TRIAL 111111-111112  
 L80 339051 SEA ABB=ON PLU=ON ?EXTRACT?  
 L81 2 SEA ABB=ON PLU=ON L79 AND L80  
 L82 908426 SEA ABB=ON PLU=ON ?DIABET? OR ?HYPERTENS? OR ?HYPOLIPEM? OR  
 OBES? OR ANTIOBES? OR ?HYPERLIPID? OR BLOOD PRESS? OR BODY  
 WEIGHT  
 L83 19261 SEA ABB=ON PLU=ON L82 AND (L77 OR L78)  
 L\*\*\* DEL 0 S L82 AND L76  
 L84 15 SEA ABB=ON PLU=ON L82 AND L76  
 D SCA  
 L85 14 SEA ABB=ON PLU=ON L84 NOT L79  
 D TRIAL 1-14  
 L86 20281 SEA ABB=ON PLU=ON BIOACTIV? OR BIO ACTIV?  
 L87 2425 SEA ABB=ON PLU=ON (L77 OR L78) AND L86  
 L88 103 SEA ABB=ON PLU=ON (L77 OR L78) AND L86 AND L82  
 D TRIAL 1-10  
 L89 63947 SEA ABB=ON PLU=ON (L77 OR L78) (L) (TU OR PD OR PK OR AD)/CT  
 L90 2767 SEA ABB=ON PLU=ON L89 AND L82  
 L91 14 SEA ABB=ON PLU=ON L89 AND L82 AND L86  
 D TRIAL 1-14  
 L92 82526 SEA ABB=ON PLU=ON L82 (L) DT/CT  
 L\*\*\* DEL 2767 S L89 AND L82  
 L93 116 SEA ABB=ON PLU=ON L92 AND L89  
 L94 0 SEA ABB=ON PLU=ON L93 AND L76  
 L95 3 SEA ABB=ON PLU=ON L92 AND L89 AND L80  
 D TRIAL 1-3  
 L96 1331 SEA ABB=ON PLU=ON ANTI-OBES?  
 L97 0 SEA ABB=ON PLU=ON L96 (L) DT/CT  
 D TRIAL L93 1-10  
 L98 1331 SEA ABB=ON PLU=ON ANTI-OBES?  
 D TRIAL 1-3

D TRIAL 4  
 D TRIAL 100  
 L99 10 SEA ABB=ON PLU=ON (L77 OR L78) AND L98  
 L100 125 SEA ABB=ON PLU=ON L93 OR L99  
 D TRIAL 1-5  
 L101 2 SEA ABB=ON PLU=ON L100 AND L86  
 D TRIAL 1-2  
 L102 0 SEA ABB=ON PLU=ON L100 AND L76  
 D TRIAL L100 50-60  
 L103 6543 SEA ABB=ON PLU=ON L77 (L) (TO OR PD OR PK OR AD)/CT  
 L104 6 SEA ABB=ON PLU=ON L103 AND L92  
 D TRIAL 1-6  
 L105 0 SEA ABB=ON PLU=ON L103 AND L98  
 L106 30353 SEA ABB=ON PLU=ON L82 (L) (TU OR PD OR PK OR AD)/CT  
 L107 2 SEA ABB=ON PLU=ON L103 AND L106  
 D TRIAL 1-2  
 L108 52 SEA ABB=ON PLU=ON L89 AND L106  
 D TRIAL 1-10  
 L109 196498 SEA ABB=ON PLU=ON MOLECULAR WEIGHT  
 L110 401681 SEA ABB=ON PLU=ON RATIO  
 L111 0 SEA ABB=ON PLU=ON (L101 OR L102 OR L104 OR L107) AND (L109 OR L110)  
 L112 39599 SEA ABB=ON PLU=ON (L77 OR L78) AND (L109 OR L110)  
 L113 1448 SEA ABB=ON PLU=ON (L77 OR L78) AND (L109 OR L110) AND L82  
 D TRIAL 1-5  
 L114 455 SEA ABB=ON PLU=ON L77 AND (L109 OR L110) AND L82  
 L115 5 SEA ABB=ON PLU=ON L77 AND (L109 OR L110) AND L82 AND L106  
 D TRIAL 1-5

FILE 'EMBASE' ENTERED AT 10:19:27 ON 03 MAY 2006

FILE 'MEDLINE' ENTERED AT 10:19:43 ON 03 MAY 2006

L116 2 SEA ABB=ON PLU=ON (L15 AND (L16 OR L17)) OR (L16 AND L17)  
 L117 36 SEA ABB=ON PLU=ON L79 OR L81 OR L84 OR L95 OR (L101 OR L102) OR L104 OR L107  
 L118 5 SEA ABB=ON PLU=ON L117 AND (L15 OR L16 OR L17)

FILE 'EMBASE' ENTERED AT 10:21:56 ON 03 MAY 2006

L119 123 SEA ABB=ON PLU=ON GRIFOLA  
 E GRIFOLA+NT/CT  
 E GRIFOLA/CT  
 E E73+ALL  
 E E3+ALL/CT  
 E GRIFOLA+ALL/CT  
 E GRIFOLIN+ALL/CT  
 L120 283 SEA ABB=ON PLU=ON GRIFOL?  
 L121 58 SEA ABB=ON PLU=ON MAITAKE  
 E MAITAKE+ALL/CT  
 E GLYCOPROTEIN+ALL/CT  
 L122 97987 SEA ABB=ON PLU=ON GLYCOPROTEIN?  
 L123 203474 SEA ABB=ON PLU=ON GLYCOPROTEIN+NT/CT  
 L124 16 SEA ABB=ON PLU=ON (L119 OR L120 OR L121) AND (L122 OR L123)  
 D TRIAL 1-15  
 L125 718137 SEA ABB=ON PLU=ON ?DIABET? OR ?HYPERTENS? OR ?HYPOLIPEM? OR OBES? OR ANTI OBES? OR ?HYPERLIPID? OR BLOOD PRESS? OR BODY WEIGHT  
 L126 431 SEA ABB=ON PLU=ON ANTI-OBES?  
 L127 718137 SEA ABB=ON PLU=ON (L125 OR L126)  
 L128 6837 SEA ABB=ON PLU=ON (L122 OR L123) (L) (DT OR AD OR DO OR PK OR PD)/CT

L129 413 SEA ABB=ON PLU=ON L128 AND L125  
 D TRIAL 1-5  
 L130 1839 SEA ABB=ON PLU=ON L122 (L) (DT OR AD OR DO OR PK OR PD)/CT  
 L131 87 SEA ABB=ON PLU=ON L130 AND L125  
 D TRIAL 1-5  
 L132 89883 SEA ABB=ON PLU=ON ((L125 OR L126)) (L) DT/CT  
 L133 30 SEA ABB=ON PLU=ON L132 AND L130  
 D TRIAL 1-30  
 L134 66371 SEA ABB=ON PLU=ON L132/MAJ  
 L\*\*\* DEL 0 S L130MAJ  
 L135 953 SEA ABB=ON PLU=ON L130/MAJ  
 L136 4 SEA ABB=ON PLU=ON L134 AND L135  
 D TRIAL 1-4  
 L137 2 SEA ABB=ON PLU=ON (L15 AND (L16 OR L17)) OR (L16 AND L17)  
 L138 1 SEA ABB=ON PLU=ON (L15 OR L16 OR L17) AND (L124 OR L136)  
 L139 8 SEA ABB=ON PLU=ON L134 AND L130  
 L140 8 SEA ABB=ON PLU=ON L135 AND L132  
 L141 12 SEA ABB=ON PLU=ON (L139 OR L140)  
 L142 0 SEA ABB=ON PLU=ON (L15 OR L16 OR L17) AND L141  
 L143 28 SEA ABB=ON PLU=ON L124 OR L136 OR L141

FILE 'MEDLINE' ENTERED AT 10:38:22 ON 03 MAY 2006  
 D QUE L117

FILE 'HCAPLUS' ENTERED AT 10:38:55 ON 03 MAY 2006  
 L144 47 SEA ABB=ON PLU=ON L19 OR L49 OR L54 OR L38 OR L56 OR L60 OR  
 L69  
 L145 45 SEA ABB=ON PLU=ON L144 NOT (L18 OR L20 OR L21)

FILE 'MEDLINE' ENTERED AT 10:39:59 ON 03 MAY 2006  
 L146 31 SEA ABB=ON PLU=ON L117 NOT (L116 OR L118)

FILE 'HCAPLUS, MEDLINE, EMBASE' ENTERED AT 10:40:37 ON 03 MAY 2006  
 L147 100 DUP REM L145 L146 L143 (4 DUPLICATES REMOVED)  
 ANSWERS '1-45' FROM FILE HCAPLUS  
 ANSWERS '46-76' FROM FILE MEDLINE  
 ANSWERS '77-100' FROM FILE EMBASE

FILE 'STNGUIDE' ENTERED AT 10:41:15 ON 03 MAY 2006

FILE 'HCAPLUS' ENTERED AT 10:41:35 ON 03 MAY 2006

FILE 'STNGUIDE' ENTERED AT 10:44:38 ON 03 MAY 2006

FILE 'HCAPLUS' ENTERED AT 10:53:34 ON 03 MAY 2006  
 L148 122674 SEA ABB=ON PLU=ON MOLECULAR WEIGHT/OBI  
 L149 98780 SEA ABB=ON PLU=ON RATIO/OBI  
 L150 552714 SEA ABB=ON PLU=ON MOLECULAR WEIGHT/BI  
 L151 QUE ABB=ON PLU=ON RATIO/BI  
 L152 12 SEA ABB=ON PLU=ON (L148 OR L149 OR L150 OR L151) AND L144

FILE 'MEDLINE' ENTERED AT 10:55:33 ON 03 MAY 2006  
 L153 196498 SEA ABB=ON PLU=ON MOLECULAR WEIGHT  
 L154 401681 SEA ABB=ON PLU=ON RATIO  
 L155 7 SEA ABB=ON PLU=ON L117 AND (L153 OR L154)

FILE 'EMBASE' ENTERED AT 10:56:36 ON 03 MAY 2006  
 L156 116135 SEA ABB=ON PLU=ON MOLECULAR WEIGHT  
 L157 372380 SEA ABB=ON PLU=ON RATIO  
 L158 3 SEA ABB=ON PLU=ON (L156 OR L157) AND L143

L159 0 SEA ABB=ON PLU=ON (L137 OR L138) AND L158  
FILE 'MEDLINE' ENTERED AT 10:57:44 ON 03 MAY 2006  
L160 1 SEA ABB=ON PLU=ON (L116 OR L118) AND L155  
FILE 'HCAPLUS' ENTERED AT 10:58:04 ON 03 MAY 2006  
L161 1 SEA ABB=ON PLU=ON (L18 OR (L20 OR L21)) AND L152  
FILE 'STNGUIDE' ENTERED AT 10:58:27 ON 03 MAY 2006  
FILE 'HCAPLUS' ENTERED AT 11:00:18 ON 03 MAY 2006  
L162 QUE ABB=ON PLU=ON (?EXTRACT? OR ?PURIF? OR ?ISOLAT?)/BI  
L163 37 SEA ABB=ON PLU=ON L144 AND L162  
FILE 'MEDLINE' ENTERED AT 11:01:34 ON 03 MAY 2006  
L164 17 SEA ABB=ON PLU=ON L117 AND L162  
FILE 'EMBASE' ENTERED AT 11:02:12 ON 03 MAY 2006  
L165 10 SEA ABB=ON PLU=ON L143 AND L162  
D TRIAL 1-5  
FILE 'STNGUIDE' ENTERED AT 11:03:56 ON 03 MAY 2006  
FILE 'HCAPLUS' ENTERED AT 11:06:49 ON 03 MAY 2006  
D QUE L18  
D QUE L20  
D QUE L21  
D QUE L161  
L166 21 SEA ABB=ON PLU=ON L18 OR (L20 OR L21) OR L161  
FILE 'MEDLINE' ENTERED AT 11:06:55 ON 03 MAY 2006  
D QUE L116  
D QUE L118  
D QUE L160  
L167 6 SEA ABB=ON PLU=ON L116 OR L118 OR L160  
FILE 'EMBASE' ENTERED AT 11:06:59 ON 03 MAY 2006  
D QUE L137  
D QUE L138  
L168 3 SEA ABB=ON PLU=ON (L137 OR L138)  
FILE 'HCAPLUS, MEDLINE, EMBASE' ENTERED AT 11:07:40 ON 03 MAY 2006  
L169 22 DUP REM L166 L167 L168 (8 DUPLICATES REMOVED)  
ANSWERS '1-21' FROM FILE HCAPLUS  
ANSWER '22' FROM FILE MEDLINE  
D IBIB ABS HITIND L169 1-21  
D IALL L169 22  
FILE 'STNGUIDE' ENTERED AT 11:09:21 ON 03 MAY 2006  
FILE 'HCAPLUS' ENTERED AT 11:13:56 ON 03 MAY 2006  
D QUE L19  
D QUE L49  
D QUE L54  
D QUE L38  
D QUE L56  
D QUE L60  
D QUE L69  
D QUE L152  
D QUE L163

L170           D QUE L61  
          45 SEA ABB=ON PLU=ON (L19 OR L49 OR L54 OR L38 OR L56 OR L60 OR  
          L69 OR L152 OR L163 OR L61) NOT L166

FILE 'MEDLINE' ENTERED AT 11:14:05 ON 03 MAY 2006

          D QUE L79  
          D QUE L81  
          D QUE L84  
          D QUE L95  
          D QUE L102  
          D QUE L101  
          D QUE L104  
          D QUE L107  
          D QUE L155  
L171           31 SEA ABB=ON PLU=ON (L79 OR L81 OR L84 OR L95 OR L102 OR L101  
          OR L104 OR L107 OR L155) NOT L167

FILE 'EMBASE' ENTERED AT 11:14:15 ON 03 MAY 2006

          D QUE L124  
          D QUE L136  
          D QUE L141  
          D QUE L158  
L172           27 SEA ABB=ON PLU=ON (L124 OR L136 OR L141 OR L158) NOT L168

FILE 'HCAPLUS, MEDLINE, EMBASE' ENTERED AT 11:14:39 ON 03 MAY 2006

L173           99 DUP REM L170 L171 L172 (4 DUPLICATES REMOVED)  
          ANSWERS '1-45' FROM FILE HCAPLUS  
          ANSWERS '46-76' FROM FILE MEDLINE  
          ANSWERS '77-99' FROM FILE EMBASE  
          D IBIB ABS HITIND L173 1-45  
          D IALL L173 46-99

FILE HOME

FILE CAPLUS

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FILE COVERS 1907 - 3 May 2006 VOL 144 ISS 19  
FILE LAST UPDATED: 2 May 2006 (20060502/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

FILE STNGUIDE  
FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: May 2, 2006 (20060502/UP).

FILE HCAPLUS

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FILE COVERS 1907 - 3 May 2006 VOL 144 ISS 19  
FILE LAST UPDATED: 2 May 2006 (20060502/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

#### FILE MEDLINE

FILE LAST UPDATED: 2 MAY 2006 (20060502/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)  
[http://www.nlm.nih.gov/pubs/techbull/nd05/nd05\\_med\\_data\\_changes.html](http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html)  
[http://www.nlm.nih.gov/pubs/techbull/nd05/nd05\\_2006\\_MeSH.html](http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html)

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

#### FILE EMBASE

FILE COVERS 1974 TO 2 May 2006 (20060502/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=>

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 11:06:49 ON 03 MAY 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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AUTHOR  
SEARCH

FILE COVERS 1907 - 3 May 2006 VOL 144 ISS 19

FILE LAST UPDATED: 2 May 2006 (20060502/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que L18

L15	118	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ZHUANG C?/AU
L16	200	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	KAWAGISHI H?/AU
L17	500	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	PREUSS H?/AU
L18	3	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L15 AND (L16 OR L17)) OR (L16 AND L17)

=> d que L20

L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT,OLD,UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L7	110962	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/OBI
L15	118	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ZHUANG C?/AU
L16	200	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	KAWAGISHI H?/AU
L17	500	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	PREUSS H?/AU
L19	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L7
L20	2	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L19 AND (L15 OR L16 OR L17)

=> d que L21

L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT,OLD,UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L15	118	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ZHUANG C?/AU
L16	200	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	KAWAGISHI H?/AU
L17	500	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	PREUSS H?/AU

L21 20 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND (L15 OR L16 OR L17)

=> d que L161

L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT,OLD,UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L7	110962	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/OBI
L8	21998	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIDIABETIC?/OBI
L9	32219	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIHYPERTENSIVE?/OBI
L10	7461	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIOBESITY?/OBI
L11	11551	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPOLIPEMIC?/OBI
L12	497	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIHYPERLIPID?/OBI
L13	65053	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L8 OR L9 OR L10 OR L11 OR L12)
L15	118	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ZHUANG C?/AU
L16	200	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	KAWAGISHI H?/AU
L17	500	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	PREUSS H?/AU
L18	3	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L15 AND (L16 OR L17)) OR (L16 AND L17)
L19	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L7
L20	2	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L19 AND (L15 OR L16 OR L17)
L21	20	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND (L15 OR L16 OR L17)
L22	11582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPOLIPEM?/OBI
L23	62013	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPERTENS?/OBI
L24	50378	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BLOOD PRESS?/OBI
L25	30252	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	OBES?/OBI
L26	23975	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BODY WEIGHT/OBI
L27	14852	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BIOACTIV?/OBI
L28	169554	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L22 OR L23 OR L24 OR L25 OR L26 OR L27)
L29	23	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L28 AND L5
L31	2391101	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?PROTEIN?/BI
L32	357876	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?SACCHAR?/BI
L34	25	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L13
L35	36	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L29 OR L34
L37	118968	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L31 AND L32
L38	3	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L37 AND L35
L40	44	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L31 AND L32
L47	1093132	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	EXTRACT?/BI
L49	13	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L19 AND L47
L50	214354	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHANOL?/OBI
L51	279379	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHANOL?/BI
L52	31588	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHYL ALCOHOL?/OBI
L53	34574	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHYL ALCOHOL?/BI
L54	2	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L50 OR L51 OR L52 OR L53) AND (L19 OR L49)
L55	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L40 AND L47
L56	12	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L55 NOT L19
L58	6	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L27
L59	650480	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	PURIF?/OBI OR ISOLAT?/OBI
L60	3	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L59 OR L47) AND L58
L66	91828	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/CW
L67	4489	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L66 (L) THU/RL
L69	11	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L67 (L) ((L8 OR L9 OR L10 OR L11 OR L12) OR (L22 OR L23 OR L24 OR L25 OR L26))
L144	47	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L19 OR L49 OR L54 OR L38 OR

```

L56 OR L60 OR L69
L148      122674 SEA FILE=HCAPLUS ABB=ON  PLU=ON  MOLECULAR WEIGHT/OBI
L149      98780 SEA FILE=HCAPLUS ABB=ON  PLU=ON  RATIO/OBI
L150      552714 SEA FILE=HCAPLUS ABB=ON  PLU=ON  MOLECULAR WEIGHT/BI
L151      QUE ABB=ON  PLU=ON  RATIO/BI
L152      12 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L148 OR L149 OR L150 OR
L151) AND L144
L161      1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L18 OR (L20 OR L21)) AND
L152

```

=> s L18 or L20-L21 or L161

```
L166      21 L18 OR (L20 OR L21) OR L161
```

=> file medline

FILE 'MEDLINE' ENTERED AT 11:06:55 ON 03 MAY 2006

FILE LAST UPDATED: 2 MAY 2006 (20060502/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>). See also:

```

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

```

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que L116

```

L15      118 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHUANG C?/AU
L16      200 SEA FILE=HCAPLUS ABB=ON  PLU=ON  KAWAGISHI H?/AU
L17      500 SEA FILE=HCAPLUS ABB=ON  PLU=ON  PREUSS H?/AU
L116     2 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L15 AND (L16 OR L17)) OR
(L16 AND L17)

```

=> d que L118

```

L15      118 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHUANG C?/AU
L16      200 SEA FILE=HCAPLUS ABB=ON  PLU=ON  KAWAGISHI H?/AU
L17      500 SEA FILE=HCAPLUS ABB=ON  PLU=ON  PREUSS H?/AU
L73      104 SEA FILE=MEDLINE ABB=ON  PLU=ON  GRIFOLA
L74      13 SEA FILE=MEDLINE ABB=ON  PLU=ON  GRIFOLA+NT/CT
L75      54 SEA FILE=MEDLINE ABB=ON  PLU=ON  MAITAKE
L76      118 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L73 OR L74 OR L75)
L77      176797 SEA FILE=MEDLINE ABB=ON  PLU=ON  ?GLYCOPROTEIN?
L78      457076 SEA FILE=MEDLINE ABB=ON  PLU=ON  GLYCOPROTEINS+NT/CT

```

L79 10 SEA FILE=MEDLINE ABB=ON PLU=ON L76 AND (L77 OR L78)  
 L80 339051 SEA FILE=MEDLINE ABB=ON PLU=ON ?EXTRACT?  
 L81 2 SEA FILE=MEDLINE ABB=ON PLU=ON L79 AND L80  
 L82 908426 SEA FILE=MEDLINE ABB=ON PLU=ON ?DIABET? OR ?HYPERTENS? OR  
 ?HYPOLIPEM? OR OBES? OR ANTI OBES? OR ?HYPERLIPID? OR BLOOD  
 PRESS? OR BODY WEIGHT  
 L84 15 SEA FILE=MEDLINE ABB=ON PLU=ON L82 AND L76  
 L86 20281 SEA FILE=MEDLINE ABB=ON PLU=ON BIOACTIV? OR BIO ACTIV?  
 L89 63947 SEA FILE=MEDLINE ABB=ON PLU=ON (L77 OR L78) (L) (TU OR PD OR  
 PK OR AD) /CT  
 L92 82526 SEA FILE=MEDLINE ABB=ON PLU=ON L82 (L) DT/CT  
 L93 116 SEA FILE=MEDLINE ABB=ON PLU=ON L92 AND L89  
 L95 3 SEA FILE=MEDLINE ABB=ON PLU=ON L92 AND L89 AND L80  
 L98 1331 SEA FILE=MEDLINE ABB=ON PLU=ON ANTI-OBES?  
 L99 10 SEA FILE=MEDLINE ABB=ON PLU=ON (L77 OR L78) AND L98  
 L100 125 SEA FILE=MEDLINE ABB=ON PLU=ON L93 OR L99  
 L101 2 SEA FILE=MEDLINE ABB=ON PLU=ON L100 AND L86  
 L102 0 SEA FILE=MEDLINE ABB=ON PLU=ON L100 AND L76  
 L103 6543 SEA FILE=MEDLINE ABB=ON PLU=ON L77 (L) (TO OR PD OR PK OR  
 AD) /CT  
 L104 6 SEA FILE=MEDLINE ABB=ON PLU=ON L103 AND L92  
 L106 30353 SEA FILE=MEDLINE ABB=ON PLU=ON L82 (L) (TU OR PD OR PK OR  
 AD) /CT  
 L107 2 SEA FILE=MEDLINE ABB=ON PLU=ON L103 AND L106  
 L117 36 SEA FILE=MEDLINE ABB=ON PLU=ON L79 OR L81 OR L84 OR L95 OR  
 (L101 OR L102) OR L104 OR L107  
 L118 5 SEA FILE=MEDLINE ABB=ON PLU=ON L117 AND (L15 OR L16 OR L17)

=> d que L160

L15 118 SEA FILE=HCAPLUS ABB=ON PLU=ON ZHUANG C?/AU  
 L16 200 SEA FILE=HCAPLUS ABB=ON PLU=ON KAWAGISHI H?/AU  
 L17 500 SEA FILE=HCAPLUS ABB=ON PLU=ON PREUSS H?/AU  
 L73 104 SEA FILE=MEDLINE ABB=ON PLU=ON GRIFOLA  
 L74 13 SEA FILE=MEDLINE ABB=ON PLU=ON GRIFOLA+NT/CT  
 L75 54 SEA FILE=MEDLINE ABB=ON PLU=ON MAITAKE  
 L76 118 SEA FILE=MEDLINE ABB=ON PLU=ON (L73 OR L74 OR L75)  
 L77 176797 SEA FILE=MEDLINE ABB=ON PLU=ON ?GLYCOPROTEIN?  
 L78 457076 SEA FILE=MEDLINE ABB=ON PLU=ON GLYCOPROTEINS+NT/CT  
 L79 10 SEA FILE=MEDLINE ABB=ON PLU=ON L76 AND (L77 OR L78)  
 L80 339051 SEA FILE=MEDLINE ABB=ON PLU=ON ?EXTRACT?  
 L81 2 SEA FILE=MEDLINE ABB=ON PLU=ON L79 AND L80  
 L82 908426 SEA FILE=MEDLINE ABB=ON PLU=ON ?DIABET? OR ?HYPERTENS? OR  
 ?HYPOLIPEM? OR OBES? OR ANTI OBES? OR ?HYPERLIPID? OR BLOOD  
 PRESS? OR BODY WEIGHT  
 L84 15 SEA FILE=MEDLINE ABB=ON PLU=ON L82 AND L76  
 L86 20281 SEA FILE=MEDLINE ABB=ON PLU=ON BIOACTIV? OR BIO ACTIV?  
 L89 63947 SEA FILE=MEDLINE ABB=ON PLU=ON (L77 OR L78) (L) (TU OR PD OR  
 PK OR AD) /CT  
 L92 82526 SEA FILE=MEDLINE ABB=ON PLU=ON L82 (L) DT/CT  
 L93 116 SEA FILE=MEDLINE ABB=ON PLU=ON L92 AND L89  
 L95 3 SEA FILE=MEDLINE ABB=ON PLU=ON L92 AND L89 AND L80  
 L98 1331 SEA FILE=MEDLINE ABB=ON PLU=ON ANTI-OBES?  
 L99 10 SEA FILE=MEDLINE ABB=ON PLU=ON (L77 OR L78) AND L98  
 L100 125 SEA FILE=MEDLINE ABB=ON PLU=ON L93 OR L99  
 L101 2 SEA FILE=MEDLINE ABB=ON PLU=ON L100 AND L86  
 L102 0 SEA FILE=MEDLINE ABB=ON PLU=ON L100 AND L76  
 L103 6543 SEA FILE=MEDLINE ABB=ON PLU=ON L77 (L) (TO OR PD OR PK OR  
 AD) /CT

```

L104      6 SEA FILE=MEDLINE ABB=ON  PLU=ON  L103 AND L92
L106     30353 SEA FILE=MEDLINE ABB=ON  PLU=ON  L82 (L) (TU OR PD OR PK OR
          AD)/CT
L107      2 SEA FILE=MEDLINE ABB=ON  PLU=ON  L103 AND L106
L116      2 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L15 AND (L16 OR L17)) OR
          (L16 AND L17)
L117     36 SEA FILE=MEDLINE ABB=ON  PLU=ON  L79 OR L81 OR L84 OR L95 OR
          (L101 OR L102) OR L104 OR L107
L118      5 SEA FILE=MEDLINE ABB=ON  PLU=ON  L117 AND (L15 OR L16 OR L17)
L153     196498 SEA FILE=MEDLINE ABB=ON  PLU=ON  MOLECULAR WEIGHT
L154     401681 SEA FILE=MEDLINE ABB=ON  PLU=ON  RATIO
L155      7 SEA FILE=MEDLINE ABB=ON  PLU=ON  L117 AND (L153 OR L154)
L160      1 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L116 OR L118) AND L155

```

=> s L116 or L118 or L160

```
L167      6 L116 OR L118 OR L160
```

=> file embase

FILE 'EMBASE' ENTERED AT 11:06:59 ON 03 MAY 2006  
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FILE COVERS 1974 TO 2 May 2006 (20060502/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default)  
and biweekly.

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> d que L137

```

L15      118 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHUANG C?/AU
L16      200 SEA FILE=HCAPLUS ABB=ON  PLU=ON  KAWAGISHI H?/AU
L17      500 SEA FILE=HCAPLUS ABB=ON  PLU=ON  PREUSS H?/AU
L137      2 SEA FILE=EMBASE ABB=ON  PLU=ON  (L15 AND (L16 OR L17)) OR (L16
          AND L17)

```

=> d que L138

```

L15      118 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHUANG C?/AU
L16      200 SEA FILE=HCAPLUS ABB=ON  PLU=ON  KAWAGISHI H?/AU
L17      500 SEA FILE=HCAPLUS ABB=ON  PLU=ON  PREUSS H?/AU
L119     123 SEA FILE=EMBASE ABB=ON  PLU=ON  GRIFOLA
L120     283 SEA FILE=EMBASE ABB=ON  PLU=ON  GRIFOL?
L121      58 SEA FILE=EMBASE ABB=ON  PLU=ON  MAITAKE
L122     97987 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOPROTEIN?
L123     203474 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOPROTEIN+NT/CT
L124      16 SEA FILE=EMBASE ABB=ON  PLU=ON  (L119 OR L120 OR L121) AND
          (L122 OR L123)
L125     718137 SEA FILE=EMBASE ABB=ON  PLU=ON  ?DIABET? OR ?HYPERTENS? OR
          ?HYPOLIPEM? OR OBES? OR ANTIOBES? OR ?HYPERLIPID? OR BLOOD
          PRESS? OR BODY WEIGHT
L126     431 SEA FILE=EMBASE ABB=ON  PLU=ON  ANTI-OBES?
L130     1839 SEA FILE=EMBASE ABB=ON  PLU=ON  L122 (L) (DT OR AD OR DO OR PK

```

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OR PD)/CT
L132      89883 SEA FILE=EMBASE ABB=ON  PLU=ON  ((L125 OR L126)) (L) DT/CT
L134      66371 SEA FILE=EMBASE ABB=ON  PLU=ON  L132/MAJ
L135      953 SEA FILE=EMBASE ABB=ON  PLU=ON  L130/MAJ
L136      4 SEA FILE=EMBASE ABB=ON  PLU=ON  L134 AND L135
L138      1 SEA FILE=EMBASE ABB=ON  PLU=ON  (L15 OR L16 OR L17) AND (L124
OR L136)

```

=> s L137-L138

L168 3 (L137 OR L138)

=> dup rem L166 L167 L168

FILE 'HCAPLUS' ENTERED AT 11:07:40 ON 03 MAY 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE 'MEDLINE' ENTERED AT 11:07:40 ON 03 MAY 2006

FILE 'EMBASE' ENTERED AT 11:07:40 ON 03 MAY 2006

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PROCESSING COMPLETED FOR L166

PROCESSING COMPLETED FOR L167

PROCESSING COMPLETED FOR L168

L169 22 DUP REM L166 L167 L168 (8 DUPLICATES REMOVED)

ANSWERS '1-21' FROM FILE HCAPLUS

ANSWER '22' FROM FILE MEDLINE

=> d ibib abs hitind L169 1-21; d iall L169 22

L169 ANSWER 1 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2003:694006 HCAPLUS

DOCUMENT NUMBER: 140:93082

TITLE: Effects of niacin-bound chromium, **Maitake** mushroom fraction SX and (-)-hydroxycitric acid on the metabolic syndrome in aged diabetic Zucker fatty rats

AUTHOR(S): Talpur, Nadeem; Echard, Bobby W.; Yasmin, Taharat; Bagchi, Debasis; **Preuss, Harry G.**

CORPORATE SOURCE: Department of Physiology and Biophysics, Georgetown University Medical Center, Washington, DC, USA

SOURCE: Molecular and Cellular Biochemistry (2003), 252(1&2), 369-377

CODEN: MCBIB8; ISSN: 0300-8177

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Previous studies have demonstrated that niacin-bound chromium (NBC), **Maitake** mushroom, and (-)-hydroxycitric acid (HCA-SX) can ameliorate hypertension, dyslipidemia, and diabetes mellitus. They may be useful in body weight (BW) management. We used aged diabetic Zucker fatty rats (ZFR, 70-75 wk old) to determine whether NBC, fraction SX of **Maitake** mushroom (MSX), and 60% (-)-hydroxycitric acid (HCA-SX) from *Garcinia cambogia*, alone or in combination, can affect the metabolic syndrome X. The metabolic syndrome X is a concurrence of disturbed glucose and insulin metabolism, overweight, abdominal fat distribution, mild dyslipidemia, and hypertension, all of which are associated with subsequent development of type 2 diabetes mellitus and cardiovascular disease. Four groups of 8 ZFR were gavaged daily with the 3 different supplements. For

the initial 3 wk, the control ZFR received only water, the second group received NBC with 40 µg elemental Cr/day, the third group MSX at 100 mg/day, and the fourth group HCA-SX at 200 mg/day. During weeks 4-6, the doses in each treatment were doubled. The control rats lost each .apprx.50 g BW over 6 wk of treatment, which is characteristic of these animals in declining health. The 8 ZFR receiving NBC lost each .apprx.9 g BW, while rats fed MSX lost each 16 g BW. ZFR fed HCA-SX simulated the pattern in the control group, as they lost each .apprx.46 g BW. The wide individual variations resulted in a lack of statistical significance among the groups. Nevertheless, 75% ZFR in the control group lost >50 g BW over 6 wk, whereas none of the ZFR fed NBC, 25% ZFR fed MSX, and 57% ZFR fed HCA-SX lost >50 g BW over 6 wk. ZFR in all 3 treatment groups had lower blood pressures compared to controls and this effect seemed to be dose related. The general trend was for renal and liver blood parameters, hepatic and renal lipid peroxidn., and DNA fragmentation to improve due to the supplementation with these natural products. Combination treatment with the 3 supplements led to lower systolic blood pressure and maintenance of BW compared to controls. Elderly diabetics and even aging individuals might benefit from similar dietary regimen.

- CC 18-1 (Animal Nutrition)  
Section cross-reference(s): 14
- ST nutrition chromium **Maitake** mushroom hydroxycitrate blood  
pressure body wt
- IT Blood  
Blood pressure  
Body weight  
**Grifola frondosa**  
Kidney  
Lipid peroxidation  
Liver  
Nutrition, animal  
(dietary niacin-bound chromium, **Maitake** mushroom fraction SX  
and (-)-hydroxycitric acid effects on metabolic syndrome in aged  
diabetic Zucker fatty rats)
- IT DNA  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(dietary niacin-bound chromium, **Maitake** mushroom fraction SX  
and (-)-hydroxycitric acid effects on metabolic syndrome in aged  
diabetic Zucker fatty rats)
- IT Metabolic disorders  
(metabolic syndrome X; dietary niacin-bound chromium, **Maitake**  
mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic  
syndrome in aged diabetic Zucker fatty rats)
- IT 50-99-7, D-Glucose, biological studies 57-13-6, Urea, biological studies  
60-27-5, Creatinine 9000-86-6, Alt 9000-97-9, Ast  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(dietary niacin-bound chromium, **Maitake** mushroom fraction SX  
and (-)-hydroxycitric acid effects on metabolic syndrome in aged  
diabetic Zucker fatty rats)
- IT 7440-47-3, Chromium, biological studies 27750-10-3, (-)-Hydroxycitric  
acid 64452-96-6, 3-Pyridinecarboxylic acid, chromium(3+) salt  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(dietary niacin-bound chromium, **Maitake** mushroom fraction SX  
and (-)-hydroxycitric acid effects on metabolic syndrome in aged  
diabetic Zucker fatty rats)
- REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

DOCUMENT NUMBER: 138:265554  
 TITLE: Antihypertensive and metabolic effects of whole **Maitake** mushroom powder and its fractions in two rat strains  
 AUTHOR(S): Talpur, Nadeem A.; Echard, Bobby W.; Fan, Arthur Yin; Jaffari, Omeed; Bagchi, Debasis; **Preuss, Harry G.**  
 CORPORATE SOURCE: Department of Physiology and Biophysics, Georgetown University Medical Center, Washington, DC, USA  
 SOURCE: Molecular and Cellular Biochemistry (2002), 237(1&2), 129-136  
 CODEN: MCBIB8; ISSN: 0300-8177  
 PUBLISHER: Kluwer Academic Publishers  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB **Maitake** mushroom has been reported to favorably influence hypertension and diabetes mellitus. This study compared the effects of whole **Maitake** mushroom powder and two exts., designated as ether-soluble (ES) and water-soluble (WS), on Zucker fatty rats (ZFR), a model of insulin resistance, and on spontaneously hypertensive rats (SHR), a model of genetic hypertension. The initial study followed four groups of ZFR and SHR receiving special diets: a basal diet (BD), BD plus whole **Maitake** mushroom powder (20% weight/weight), BD plus fraction ES (0.10% weight/weight), and BD plus WS (0.22% weight/weight). Different effects of these

dietary regimens on the 2 rat strains were found. After 35 days, only consumption of the ES diet decreased systolic BP (SBP) in SHR, while in ZFR only the groups consuming the whole **Maitake** and WS diets showed decreased SBP. A challenge test with losartan (an angiotensin II receptor blocker) indicated that angiotensin II does not play a major role in SBP regulation of ZFR but does in SHR, where consumption of ES lowered the activity of this system. In SHR, glucose, cholesterol, circulating insulin and HbA1C were virtually similar among all the dietary groups, but whole **Maitake**, ES and WS diets were associated with decreased triglycerides, and the ES diet with lowered serum creatinine. In ZFR, circulating insulin and HbA1C were decreased in the whole **Maitake** powder and ES groups, and tended to be lower in the WS group, compared to control. In further studies, ZFR were gavaged once daily with water (control), 44 mg of fraction WS, or 44 mg of fraction WS plus 100 µg niacin-bound Cr. Oral gavage of WS lowered SBP and circulating glucose concns., especially with the addition of Cr. It is concluded that these forms

of **Maitake** mushroom have antihypertensive and antidiabetic potential which differ among rat strains. The ES fraction may decrease SBP in SHR via alteration of the renin-angiotensin system.

CC 1-12 (Pharmacology)

Section cross-reference(s): 11

ST **Maitake** mushroom antidiabetic antihypertensive

IT Antidiabetic agents

Antihypertensives

Diabetes mellitus

**Grifola frondosa**

(antihypertensive and antidiabetic effects of whole **Maitake** mushroom powder and its fractions)

IT Renin-angiotensin system

(antihypertensive and antidiabetic effects of whole **Maitake** mushroom powder and its fractions in relation to effects on)

IT Glycerides, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (blood; antihypertensive and antidiabetic effects of whole

**Maitake** mushroom powder and its fractions in relation to effects on)

- IT Hypertension  
(spontaneous; antihypertensive and antidiabetic effects of whole **Maitake** mushroom powder and its fractions)
- IT 62572-11-6, Hemoglobin Alc  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antihypertensive and antidiabetic effects of whole **Maitake** mushroom powder and its fractions in relation to effects on)
- IT 9004-10-8, Insulin, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antihypertensive and antidiabetic effects of whole **Maitake** mushroom powder and its fractions in relation to effects on resistance to)
- IT 7440-47-3D, Chromium, niacin-bound  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(antihypertensive and antidiabetic effects of whole **Maitake** mushroom powder and its fractions plus)
- IT 50-99-7, D-Glucose, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(blood; antihypertensive and antidiabetic effects of whole **Maitake** mushroom powder and its fractions in relation to effects on)

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L169 ANSWER 3 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 2004:286031 HCAPLUS

TITLE: Effects of **Maitake** mushroom fractions on blood pressure of Zucker fatty rats

AUTHOR(S): Talpur, Nadeem; Echard, Bobby; Dadgar, Azod; Aggarwal, Sarla; Zhuang, Cun; Bagchi, Debasis; Preuss, Harry G.

CORPORATE SOURCE: Dep. Physiology, Med. and Pathology, Georgetown Univ. Med. Center, Washington, DC, 20057, USA

SOURCE: Research Communications in Molecular Pathology and Pharmacology (2002), 112(1-4), 68-82  
CODEN: RCMPE6; ISSN: 1078-0297

PUBLISHER: PJD Publications Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A link exists between insulin resistance and many chronic disorders of aging including advancing-age. A safer means to prevent or, at least, slow the erosion of insulin sensitivity would provide a novel approach to better health. We compared the ability of a specific extract labeled fraction ' SX, as well as whole **Maitake** powder, fraction ES and fraction D of **Maitake** to influence SBP and various pertinent biochem. parameters when given orally to Zucker Fatty rats, a model of insulin resistance and type 2 diabetes mellitus. A secondary gain was the ability to ascertain the effects of bitter melon, olive oil, and sesame oil alone and combined with fraction SX to influence SBP. We found that a water-soluble fraction obtained from **Maitake** mushroom (SX) lowers SBP and fasting blood glucose significantly over the three to six weeks of study. While whole **Maitake** fraction lowered SBP effectively, the effects on fasting blood sugar were not apparent under the conditions of study. In contrast to fraction SX and fraction D, developed primarily to enhance immunity and suppress tumor development and growth, has essentially no effect on SBP under the conditions examined. An ether soluble fraction designated ES lowers SBP significantly. Interestingly, olive

oil, unlike sesame oil, also lowers SBP. Finally, bitter melon and a combination of SX plus bitter melon also lower SBP. We conclude that fraction SX of **Maitake** mushroom may be useful to treat insulin resistance alone or combined with other natural products such as bitter melon and niacin-bound chromium.

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L169 ANSWER 4 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 1996:490485 HCAPLUS

DOCUMENT NUMBER: 125:188652

TITLE: Purification and characterization of a lectin from the toxic mushroom *Amanita pantherina*

AUTHOR(S): **Zhuang, Cun**; Murata, Takeomi; Usui, Taichi; **Kawagishi, Hirokazu**; Kobayashi, Kazukiyo

CORPORATE SOURCE: Department of Applied Biological Chemistry, Faculty of Agriculture, Shizuoka University, 836 Ohya, Shizuoka, 422, Japan

SOURCE: *Biochimica et Biophysica Acta*, General Subjects (1996), 1291(1), 40-44

CODEN: BBGSB3; ISSN: 0304-4165

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A lectin (APL) was isolated from the mushroom, *A. pantherina*, by means of hydrophobic chromatog. on Butyl-Toyopearl, affinity chromatog. on bovine submaxillary mucin (BSM)-Toyopearl, and gel filtration on Superose 12 HR10/30 using a FPLC system. This lectin was composed of 2 identical subunits of 22 kDa and the mol. weight of the intact lectin was estimated to be 43 kDa by gel filtration. In hemagglutination inhibition assays, it exhibited sugar-binding specificities toward GlcNAc $\beta$ 1 $\rightarrow$ 4Man.bet a.-pNP, Gal $\beta$ 1 $\rightarrow$ 4GlcNAc $\beta$ 1 $\rightarrow$ 4GlcNAc, and Gal $\beta$ 1 $\rightarrow$ 4GlcNAc $\beta$ 1 $\rightarrow$ 4GlcNAc $\beta$ 1 $\rightarrow$ 4GlcNAc (pNP = p-nitrophenyl) among mono- and oligosaccharides tested. Among glycoproteins tested, BSM and asialo-BSM were the strongest inhibitors.

CC 6-3 (General Biochemistry)

L169 ANSWER 5 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5

ACCESSION NUMBER: 1990:474921 HCAPLUS

DOCUMENT NUMBER: 113:74921

TITLE: Isolation and characterization of a lectin from *Grifola frondosa* fruiting bodies

AUTHOR(S): **Kawagishi, Hirokazu**; Nomura, Aya; Mizuno, Takashi; Kimura, Atsuo; Chiba, Seiya

CORPORATE SOURCE: Fac. Agric., Shizuoka Univ., Shizuoka, 422, Japan

SOURCE: *Biochimica et Biophysica Acta*, General Subjects (1990), 1034(3), 247-52

CODEN: BBGSB3; ISSN: 0304-4165

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An N-acetylgalactosamine-specific lectin (GFL) was isolated from *G. frondosa* fruiting bodies by affinity chromatogs. on acid-treated Sepharose CL-4B and then GalNAc-Toyopearl. The isolated lectin agglutinated all types of erythrocytes equally. Mol. masses estimated by gel filtration under various buffers and matrixes varied from 30 to 52 kDa. SDS-PAGE in the presence or absence of 2-mercaptoethanol showed three major bands of 33, 66 and 100 kDa and a faint band of 65 kDa. This lectin exhibited GalNAc-specificity. The protein was a glycoprotein containing 3.3% total sugar, and the amino acid anal. revealed a high content of acidic and hydroxy amino acids and a low content of methionine and histidine. GFL

was cytotoxic against HeLa cells. The toxicity did not appear after preincubating the lectin with the haptenic sugar N-acetylgalactosamine.

CC 11-1 (Plant Biochemistry)  
 ST **Grifola** galactosamine lectin purifn  
 IT **Grifola frondosa**  
 (N-acetylgalactosamine-specific lectin of, purification and characterization of)  
 IT Agglutinins and Lectins  
 RL: BIOL (Biological study)  
 (hemagglutinins, of **Grifola frondosa**, purification and characterization of)  
 IT 1811-31-0  
 RL: BIOL (Biological study)  
 (lectin from **Grifola frondosa** with specificity for, purification and characterization of)

L169 ANSWER 6 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:59966 HCAPLUS  
 DOCUMENT NUMBER: 142:130693  
 TITLE: **Glycoprotein** with antidiabetic, antihypertensive, antiobesity and antihyperlipidemic effects from **Grifola frondosa**, and a method for preparing same  
 INVENTOR(S): **Zhuang, Cun; Kawagishi, Hirokazu; Preuss, Harry G.**  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 8 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005014683	A1	20050120	<del>US 2004-762927</del>	20040122
JP 2005068112	A2	20050317	JP 2003-303462	20030827
CA 2455655	AA	20050118	CA 2004-2455655	20040122

PRIORITY APPLN. INFO.: US 2003-488337P P 20030718

AB A glycoprotein extracted from the fruiting body of *G. frondosa* is demonstrated to have antidiabetic, antihypertensive, antiobesity and antihyperlipidemic effects, and has great potential as an active component for pharmaceuticals, dietary supplements or health food prepns. to treat and/or prevent the above diseases. This invention is to provide the glycoprotein and its preparation method.

IC ICM A61K038-16  
 ICS A61K035-84; A61K038-14; C07K014-375

INCL 514008000; 424195150; 530322000

CC 10-1 (Microbial, Algal, and Fungal Biochemistry)  
 Section cross-reference(s): 16

ST antidiabetic antihypertensive antiobesity antihyperlipidemic  
**glycoprotein Grifola**

IT Antidiabetic agents  
 Antihypertensives  
 Antiobesity agents  
**Grifola frondosa**  
 Hypolipemic agents  
 (glycoprotein with antidiabetic, antihypertensive, antiobesity and antihyperlipidemic effects from **Grifola frondosa**)

IT **Glycoproteins**

RL: BMF (Bioindustrial manufacture); PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(**glycoprotein** with antidiabetic, antihypertensive, antiobesity and antihyperlipidemic effects from **Grifola frondosa**)

L169 ANSWER 7 OF 22 HCAPLUS. COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:1081507 HCAPLUS

DOCUMENT NUMBER: 143:43119

TITLE: Overview of the use of **maitake** mushroom and fraction D in cancer

AUTHOR(S): **Preuss, Harry**; Konno, Sensuke; Bagchi, Debasis

CORPORATE SOURCE: Georgetown Medical Center, USA

SOURCE: Phytopharmaceuticals in Cancer Chemoprevention (2005), 509-517. Editor(s): **Bagchi, Debasis; Preuss, Harry G.** CRC Press LLC: Boca Raton, Fla.  
CODEN: 69GGT2; ISBN: 0-8493-1560-3

DOCUMENT TYPE: Conference; General Review

LANGUAGE: English

AB A review. Most studies on the immunol. properties and cancer preventive effects of **maitake** mushroom (**Grifola frondosa**) have used mainly one of its bioactive exts., the **maitake** fraction D. The major beneficial effects of the fraction D seem to derive from its immunity-enhancing potential, but other very different physiol. mechanisms may contribute to the overall therapeutic effect related to antiangiogenesis and apoptosis. The physiol. mechanisms of **maitake** mushroom activities are discussed.

CC 18-0 (Animal Nutrition)

Section cross-reference(s): 14

ST review nutrition **Grifola maitake** mushroom glucan cancer

IT **Grifola frondosa**

Neoplasm

Nutrition, animal

(dietary **maitake** mushroom (**Grifola frondosa**) and its fraction D in cancer prevention)

REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L169 ANSWER 8 OF 22 HCAPLUS. COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:754752 HCAPLUS

DOCUMENT NUMBER: 140:338398

TITLE: Bioactive substances in **Maitake** (**Grifola frondosa**) and its medicinal utilization

AUTHOR(S): **Zhuang, Cun**

CORPORATE SOURCE: Bio-Research Institute, NJ, USA

SOURCE: Food Style 21 (2003), 7(9), 77-79  
CODEN: FSTYFF; ISSN: 1343-9502

PUBLISHER: Shokuhin Kagaku Shinbunsha

DOCUMENT TYPE: Journal; General Review

LANGUAGE: Japanese

AB A review. The antitumor effect of **Grifola frondosa**-derived  $\beta$ -glucan product, Grifon-D-fraction (GD), and the anti-syndrome X (mixed symptoms of obesity, glucose intolerance, dyslipidemia, and hypertension, etc.) effect of **Grifola frondosa**-derived active component are discussed.

CC 18-0 (Animal Nutrition)  
 Section cross-reference(s): 1, 63  
 ST review **Grifola** glucan antitumor syndrome X  
 IT Antitumor agents  
     **Grifola frondosa**  
     (bioactive substances in **Maitake (Grifola frondosa)**  
     and its medicinal utilization)  
 IT Natural products, pharmaceutical  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
     (bioactive substances in **Maitake (Grifola frondosa)**  
     and its medicinal utilization)  
 IT Metabolic disorders  
     (metabolic syndrome X; bioactive substances in **Maitake (Grifola frondosa)** and its medicinal utilization)  
 IT 9041-22-9,  $\beta$ -Glucan  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
     (bioactive substances in **Maitake (Grifola frondosa)**  
     and its medicinal utilization)

L169 ANSWER 9 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:722887 HCAPLUS  
 DOCUMENT NUMBER: 133:362260  
 TITLE: Suppression of D-galactosamine-induced liver injury by mushrooms in rats  
 AUTHOR(S): Lee, Eun Woo; He, Puming; Kawagishi, Hirokazu ; Sugiyama, Kimio  
 CORPORATE SOURCE: Department of Applied Biochemistry, Faculty of Agriculture, Shizuoka University, Shizuoka, 422-8529, Japan  
 SOURCE: Bioscience, Biotechnology, and Biochemistry (2000), 64(9), 2001-2004  
     CODEN: BBBIEJ; ISSN: 0916-8451  
 PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Several species of edible mushroom were found to suppress D-galactosamine-induced enhancement of blood plasma alanine and aspartate aminotransferase activities when the powdered mushrooms were added to the diet at 5% and fed to 5-wk-old male Wistar rats for 2 wk. The 7 mushroom species tested were *Lentinus edodes*, *Pleurotus ostreatus*, *Hypsizygus marmoreus*, *Fulammulina velutipes*, *Agaricus bisporus*, **Grifola frondosa**, and *Auricularia auricula*. *G. frondosa* had the most potent effects in a dose-dependent manner. Significant effects were observed only with water-soluble low-mol.-weight fraction of *G. frondosa*. Thus, several mushroom species can have protective effects against liver injury induced by D-galactosamine.

CC 18-7 (Animal Nutrition)  
 Section cross-reference(s): 14  
 IT *Agaricus bisporus*  
*Auricularia auricula*  
 Blood plasma  
*Flammulina velutipes*  
     **Grifola frondosa**  
*Hypsizygus marmoreus*  
*Lentinula edodes*  
 Mushroom  
 Nutrition, animal  
*Pleurotus ostreatus*  
     (dietary mushrooms protection against D-galactosamine-induced liver

injury in rats)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L169 ANSWER 10 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:255676 HCAPLUS

DOCUMENT NUMBER: 133:73464

TITLE: A lectin from an edible mushroom *Pleurotus ostreatus* as a food intake-suppressing substance

AUTHOR(S): **Kawagishi, Hirokazu**; Suzuki, Hiroshi; Watanabe, Haruki; Nakamura, Hiroko; Sekiguchi, Takehiko; Murata, Takeomi; Usui, Taichi; Sugiyama, Kimio; Suganuma, Hiroyuki; Inakuma, Takahiro; Ito, Kiyoshi; Hashimoto, Yohichi; Ohnishi-Kameyama, Mayumi; Nagata, Tadahiro

CORPORATE SOURCE: Faculty of Agriculture, Department of Applied Biological Chemistry, Shizuoka University, Shizuoka, 422-8529, Japan

SOURCE: *Biochimica et Biophysica Acta*, General Subjects (2000), 1474(3), 299-308

CODEN: BBGSB3; ISSN: 0304-4165

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In an experiment in which rats had free access to food and water, the rats did not eat the diet containing the mushroom *P. ostreatus* even if they were emaciated. A *P. ostreatus* lectin (POL) was isolated from the mushroom as the food intake-suppression principle. In hemagglutination inhibition assays, Me- $\alpha$ GalNAc was the most potent inhibitor among the monosaccharides tested. Among all the sugars tested, 2'-fucosyllactose (Fuc $\alpha$ 1 $\rightarrow$ 2Gal $\beta$ 1 $\rightarrow$ 4Glc) was the strongest inhibitor and its inhibitory potency was 5-times greater than that of Me- $\alpha$ GalNAc. POL had a binding ability to bovine submaxillary mucin (BSM) and asialo-BSM; other glycoproteins were inert to the binding. The food intake-suppressing activity of POL was dose-dependent. A diet containing 0.1% POL caused a 50% decrease in the food intake compared to controls.

CC 18-7 (Animal Nutrition)  
Section cross-reference(s): 10

IT *Agaricus bisporus*  
*Agaricus blazei*  
*Agrocybe cylindracea*  
Appetite depressants  
*Flammulina velutipes*  
*Ganoderma lucidum*  
***Grifola frondosa***  
*Hericius erinaceus*  
*Lentinula edodes*  
*Lyophyllum ulmarium*  
*Pholiota nameko*  
*Pleurotus abalonus*  
*Pleurotus cornucopiae*  
*Pleurotus ostreatus*  
*Tricholoma japonicum*

(lectin from *Pleurotus ostreatus* edible mushroom as food intake-suppressing substance in rats and its isolation and characterization)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L169 ANSWER 11 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:681520 HCAPLUS  
 DOCUMENT NUMBER: 134:187693  
 TITLE: Biological responses from *Grifola frondosa*  
 AUTHOR(S): Zhuang, Cun; Mizuno, Takashi  
 CORPORATE SOURCE: Bio Research Institute, Ridgefield Park, NJ, 07660, USA  
 SOURCE: International Journal of Medicinal Mushrooms (1999), 1(4), 317-324  
 CODEN: IMMUFJ; ISSN: 1521-9437  
 PUBLISHER: Begell House, Inc.  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: English

AB A review with several refs. is given on *Grifola frondosa*, an edible mushroom with a good flavor, a crisp texture, and an excellent aroma. It goes well not only with both Asian and European dishes, but is also frequently used to treat spleen and stomach ailments, and to calm the mind in traditional Chinese medicine. Since the mid-1980s, the biol. activities of *G. frondosa* were evaluated in detail. Both basic research and clin. experience have shown that *maitake* possesses the ability to produce antitumor, immunol. enhancement, and also has anti-HIV, antihypertension, antidiabetic, antihyperlipemia and antiobesity properties.

CC 1-0 (Pharmacology)

ST review *Grifola* glucan antidiabetic antiAIDS antitumor;  
*maitake* glucan antihypertensive hypolipemic antiobesity review

IT Anti-AIDS agents  
 Antidiabetic agents  
 Antihypertensives  
 Antiobesity agents  
 Antitumor agents  
*Grifola frondosa*  
 Hypolipemic agents  
 Immunostimulants

(biol. responses from *Grifola frondosa*)

IT Natural products, pharmaceutical  
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
 (biol. responses from *Grifola frondosa*)

IT 9041-22-9,  $\beta$ -Glucan  
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
 (derivs.; biol. responses from *Grifola frondosa*)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L169 ANSWER 12 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:536193 HCAPLUS  
 DOCUMENT NUMBER: 122:305599  
 TITLE: *Maitake, Grifola frondosa*:  
 pharmacological effects  
 AUTHOR(S): Mizuno, Takashi; Zhuang, Cun  
 CORPORATE SOURCE: Changchun College, Shizuoka University, Fujieda, 426, Japan  
 SOURCE: Food Reviews International (1995), 11(1), 135-49  
 CODEN: FRINEL; ISSN: 8755-9129  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: English

AB A review, with 32 refs., describing the composition, nutritional and

food-related properties, and pharmacol. active (mainly antitumor) components of the fungus *G. frondosa* (**Maitake**).

CC 1-0 (Pharmacology)  
 Section cross-reference(s): 11, 17

ST review **Grifola frondosa Maitake** pharmacol

IT Pharmaceutical natural products  
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
 (**Maitake**; pharmacol. of **Grifola frondosa** (**Maitake**))

IT Neoplasm inhibitors  
 (components of **Maitake** (**Grifola frondosa**) as)

IT **Grifola frondosa**  
 (pharmacol. of **Grifola frondosa** (**Maitake**))

L169 ANSWER 13 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:536188 HCAPLUS  
 DOCUMENT NUMBER: 123:5160  
 TITLE: Mushroom lectins  
 AUTHOR(S): **Kawagishi, Hirokazu**  
 CORPORATE SOURCE: Department Applied Biological Chemistry, Shizuoka University, Shizuoka, 422, Japan  
 SOURCE: Food Reviews International (1995), 11(1), 63-8  
 CODEN: FRINEL; ISSN: 8755-9129  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: English

AB A review with 32 refs. Many plants, animals, and microorganisms contain lectins, but relatively few studies have been conducted on lectins from mushrooms. Some lectins have been isolated from the fruiting bodies of Basidiomycetes. Among the species studied are *Ischnoderma resinum* lectin (IRA), **Grifola frondosa** lectin (GFL), *Fomes fomentarius* lectin (FFL), *Ganoderma lucidum* lectin (GLL), etc. Some properties of these lectins are presented.

CC 10-0 (Microbial, Algal, and Fungal Biochemistry)

L169 ANSWER 14 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:255365 HCAPLUS  
 DOCUMENT NUMBER: 122:27268  
 TITLE: Lactitol for lectin purification  
 INVENTOR(S): **Kawagishi, Hirokazu**  
 PATENT ASSIGNEE(S): Towa Kasei Kogyo Kk, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 06234799	A2	19940823	JP 1993-41726	19930208
JP 3515139	B2	20040405		

PRIORITY APPLN. INFO.: JP 1993-41726 19930208

AB Lactitol-containing solution is disclosed for chromatog. separation of D-galactopyranosyl group-binding lectins. The disclosed lactitol contains ≥1 functional group selecting from β-D-galactopyranosyl, β-D-galactosaminyl, or N-acetyl-β-D-galactosaminyl, and can facilitate the removal of carbohydrates from lectin extract In example,

lactitol-containing solution was used for chromatog. separation of lectin from *Arachis*

*hypogaea*, *Grifola frondosa* seed, and *Gymnothorax javanicus* liver.

IC ICM C07K015-14

ICS B01D015-00; B01D015-08; C07K003-20

CC 9-9 (Biochemical Methods)

IT *Grifola frondosa*

(seed; lactitol for lectin purification)

L169 ANSWER 15 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:181996 HCAPLUS

DOCUMENT NUMBER: 122:453

TITLE: Chemical modification and antitumor activity of polysaccharides from the mycelium of liquid-cultured *Grifola frondosa*

AUTHOR(S): Zhuang Cun; Mizuno, Takashi; Ito, Hitoshi; Shimura, Keishiro

CORPORATE SOURCE: United Grad. Sch. Agric. Sci., Gifu Univ., Gifu, 501-11, Japan

SOURCE: Nippon Shokuhin Kogyo Gakkaishi (1994), 41(10), 733-40  
CODEN: NSKGAX; ISSN: 0029-0394

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Twenty-three chemical-modified polysaccharides, including 5 polyaldehyde-, 10 polyalco-, 4 formylated-polysaccharides, and 4 formolysis products of polysaccharides, were prepared from 9 mycelial polysaccharides of *G. frondosa*. Although 3 of the original polysaccharides (FA-3, FA-2-b- $\beta$  and FII-3) had no activity, their polyaldehyde-, polyol-, formylated-, and formolyzed derivs. showed significant activity. Polyaldehyde-, and polyol-polysaccharides prepared from a polysaccharide (FIO-a- $\beta$ ) with low antitumor activity showed activity higher than the original polysaccharide. Polyaldehyde- and polyol-polysaccharides prepared from polysaccharides (FIII-1-b and FIII-2-b) with relatively high activity also showed antitumor activity higher than the original polysaccharides. The formolysis product of FIII-1-insol. with relatively high activity did not show higher antitumor activity compared with the original polysaccharide, but also show the complement C3 activation on macrophages.

CC 1-6 (Pharmacology)

Section cross-reference(s): 10

ST polysaccharide mycelium *Grifola* modification antitumor structure

IT Polysaccharides, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(Smith degradation or formic acid degradation products; antitumor activity

of

chemical modified polysaccharides from mycelium of *Grifola frondosa*)

IT *Grifola frondosa*

Neoplasm inhibitors

(antitumor activity of chemical modified polysaccharides from mycelium of *Grifola frondosa*)

IT Macrophage

(effects of chemical modified polysaccharides from mycelium of *Grifola frondosa* on the release of complement C3 from macrophage)

IT Carbohydrates and Sugars, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(alditols, as Smith degradation products of polysaccharides; antitumor activity of chemical modified polysaccharides from mycelium of *Grifola frondosa*)

IT Molecular structure-biological activity relationship

(neoplasm-inhibiting, antitumor activity of chemical modified polysaccharides from mycelium of *Grifola frondosa*)

IT 80295-41-6, Complement C3

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(effects of chemical modified polysaccharides from mycelium of *Grifola frondosa* on the release of complement C3 from macrophage)

L169 ANSWER 16 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:181995 HCAPLUS

DOCUMENT NUMBER: 122:452

TITLE: Antitumor activity and immunological property of polysaccharides from the mycelium of liquid-cultured *Grifola frondosa*

AUTHOR(S): Zhuang, Cun; Mizuno, Takashi; Ito, Hitoshi;

CORPORATE SOURCE: Shimura, Keishiro; Sumiya, Toshimitsu; Kawade, Mitsuo  
United Grad. Sch. Agric. Sci., Gifu Univ., Gifu,  
501-11, Japan

SOURCE: Nippon Shokuhin Kogyo Gakkaishi (1994), 41(10), 724-32  
CODEN: NSKGAX; ISSN: 0029-0394

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A systematic method for the fractionation and purification of antitumor polysaccharide fractions from the mycelium of liquid-cultured *G. frondosa* was established. Twenty-three polysaccharide fractions (12 water-soluble and 11 water-insol. fractions) were obtained. FI0-a- $\alpha$ , FI0-a- $\beta$ , FA-1, and FA-2-b- $\alpha$  in water-soluble fractions showed good antitumor activity against Sarcoma 180/mice, and FIII-1-a, FIII-1-b, FIII-2-a, FIII-2-b, and FIII-2-c in water-insol. fractions, markedly inhibited the growth of Sarcoma 180/mice. In addition, administration of each of FI0-a, FIII-1-a, FIII-1-b, FIII-1-c, FIII-2-a, FIII-2-b, FIII-2-c to mice could cause an evident increase in antigenic C3 release from macrophages. These results suggest that active polysaccharide fractions, which were considered to be heteroglycan or heteroglycan-protein complexes, can depress or reduce tumor growth by activating the immune system as a biol. response modifier.

CC 1-6 (Pharmacology)

Section cross-reference(s): 10

ST polysaccharide mycelium *Grifola* antitumor activity; complement C3 release polysaccharide mycelium *Grifola*

IT *Grifola frondosa*

Neoplasm inhibitors

(antitumor activity and properties of polysaccharides from mycelium of *Grifola frondosa*)

IT Polysaccharides, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)

(antitumor activity and properties of polysaccharides from mycelium of *Grifola frondosa*)

IT Macrophage

(effects of polysaccharides from mycelium of *Grifola frondosa* on release of complement C3 from macrophage)

IT Immunostimulants  
 (effects of polysaccharides from mycelium of *Grifola frondosa*  
 on release of complement C3 from macrophage in relation to antitumor  
 activity)

IT Molecular structure-biological activity relationship  
 (neoplasm-inhibiting, antitumor activity and properties of  
 polysaccharides from mycelium of *Grifola frondosa*)

IT 80295-41-6, Complement C3  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
 (Biological study); PROC (Process)  
 (effects of polysaccharides from mycelium of *Grifola frondosa*  
 on release of complement C3 from macrophage)

L169 ANSWER 17 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:671402 HCAPLUS  
 DOCUMENT NUMBER: 121:271402  
 TITLE: Fractionation and antitumor activity of  
 polysaccharides from *Grifola frondosa*  
 mycelium

AUTHOR(S): **Zhuang, Cun**; Mizuno, Takashi; Ito, Hitoshi;  
 Shimura, Keishiro; Sumiya, Toshimitsu; Kawade, Mitsuo;  
 Inamori, Yoshihiko

CORPORATE SOURCE: United Grad. Sch. Agric. Sci., Gifu Univ., Gifu,  
 501-11, Japan

SOURCE: Bioscience, Biotechnology, and Biochemistry (1994),  
 58(1), 185-88  
 CODEN: BBBIEJ; ISSN: 0916-8451

DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The authors developed a method for the fractionation and purification of  
 antitumor polysaccharides, considered to be a type of immunopotentiator or  
 BRM (biol. response modifier), from the mycelium of liquid cultured  
*Grifola frondosa*. The active polysaccharide fractions that showed  
 high inhibitory activity against sarcoma 180 were considered to be  
 heteroglycans or their protein complexes as follows, in water-soluble  
 fractions: F10-a- $\alpha$ : fucogalactomannan-protein complex; F10-a- $\beta$ :  
 mannogalactofucan; FA-1: galactoglucomannofucan-protein complex;  
 FA-2-b- $\alpha$ : glucogalactomannan-protein complex; in water-insol.  
 fractions: FIII-1-a: mannofucoglucoxytan: FIII-1-b: mannoglucofucoxytan-  
 protein complex; FIII-2-a: mannofucoglucoxytan-protein complex; FIII-2-b:  
 glucomannofucoxytan-protein complex.

CC 1-6 (Pharmacology)

ST antitumor *Grifola* polysaccharide

IT Polysaccharides, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
 (Uses)

(from *Grifola frondosa*, antitumor activity of)

IT ***Grifola frondosa***

(polysaccharides from, antitumor activity of)

IT Neoplasm inhibitors

(sarcoma, polysaccharides from *Grifola frondosa*)

L169 ANSWER 18 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:477929 HCAPLUS  
 DOCUMENT NUMBER: 121:77929  
 TITLE: The host-mediated antitumor polysaccharides. XXII.  
 Chemical modification and antitumor activation of  
 polysaccharides from the mycelium of liquid-cultured  
*Grifola frondosa*

AUTHOR(S) : **Zhuang, Cun**; Mizuno, Takashi; Ito, Hitoshi;  
Shimura, Keishiro  
CORPORATE SOURCE: United Grad. Sch. Agric. Sci., Gifu Univ., Gifu,  
501-11, Japan  
SOURCE: Shizuoka Daigaku Nogakubu Kenkyu Hokoku (1994), Volume  
Date 1993, 43, 47-59  
CODEN: SDNKAA; ISSN: 0559-8850  
DOCUMENT TYPE: Journal  
LANGUAGE: Japanese  
AB Chemical modified products of natural polysaccharides from the title fungi  
exhibited antitumor activity. 5 Polyaldehydic- and 10 polyalcoholic  
polysaccharides prepared by Smith degradation, 4 formylated- and 4 formolysis  
products of the polysaccharides by formic acid degradation were prepared and  
their antitumor activities on Sarcoma 180 and their activities for the  
release of antigenic C3 in mice were examined. Some preps. from water-soluble  
polysaccharides showed enhanced activities than the starting  
polysaccharides.  
CC 10-1 (Microbial, Algal, and Fungal Biochemistry)  
Section cross-reference(s): 1, 33  
ST **Grifola** polysaccharide chem modification antitumor  
IT Polysaccharides, biological studies  
RL: BIOL (Biological study)  
(from **Grifola frondosa**, chemical modification and antitumor  
activation of)  
IT Neoplasm inhibitors  
(polysaccharides as, from **Grifola frondosa**)  
IT **Grifola frondosa**  
(polysaccharides from, chemical modification and antitumor activation of)

L169 ANSWER 19 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:513038 HCAPLUS  
DOCUMENT NUMBER: 119:113038  
TITLE: Host-mediated antitumor polysaccharides. XVIII.  
Detailed fractionation and antitumor activity of the  
mycelial polysaccharides from liquid culture of  
**Grifola frondosa**  
AUTHOR(S) : **Zhuang, Cun**; Mizuno, Takashi; Ito, Hitoshi;  
Shimura, Keishiro; Sumiya, Toshimitsu; Kawade, Mitsuo  
CORPORATE SOURCE: Fac. Agric., Shizuoka Univ., Shizuoka, 422, Japan  
SOURCE: Shizuoka Daigaku Nogakubu Kenkyu Hokoku (1993), Volume  
Date 1992, 42, 43-58  
CODEN: SDNKAA; ISSN: 0559-8850  
DOCUMENT TYPE: Journal  
LANGUAGE: Japanese  
AB Antitumor polysaccharides in mycelium and culture broth of **Grifola**  
**frondosa** fungus were fractionated, and their antitumor activity, composition  
and other properties were studied. The mycelium obtained by liquid culture  
was crushed with 99% EtOH, and **extracted** successively with hot H<sub>2</sub>O,  
1% ammonium oxalate, and 5% NaOH to obtain 4 fractions: F I, F II, F III-1  
and F III-2. Antitumor effects against Sarcoma 180 transplanted to mice  
were the highest, when given 10 .apprx. 20 mg daily, for the fraction F  
III-2. The active 4 fractions were subfractionated by chromatog. with  
DEAE-cellulose, Toyopearl HW-65 F, and Con A-AF-Formyl Toyopearl into 30  
fractions. Fractions showing high antitumor activity were considered to  
be heteroglycans or their protein complex of **mol. weight**  
ranging from 12,800 to 65 + 104, e.g., fucogalactomannan-protein  
complex, mannogalactofucan, and galactoglucomannofucan-protein complex.  
Lower **mol. weight** components were obtained from concentrated  
culture media of *G. frondosa* by successive **extraction** with n-C<sub>6</sub>H<sub>14</sub>,  
EtOAc, and BuOH, to obtain fractions H-I, C-I, A-I, and P-1. When each of

fractions F I, F10-a (obtained from F I), F III-1, F III-2, and P-1 was administered to mice, an evident increase in the antigenic C3 release from macrophages acting as the biol. response modifier. The fraction C-I showed an evident growth inhibitory action (cytotoxicity) on human lymphocytic leukemia Molt 4B cells in vitro.

CC 10-1 (Microbial, Algal, and Fungal Biochemistry)  
 Section cross-reference(s): 1  
 ST antitumor polysaccharide **Grifola**; glycan protein complex  
**Grifola** neoplasm inhibitor  
 IT **Glycoproteins**, biological studies  
 Polysaccharides, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (from **Grifola frondosa**, antitumor activity of)  
 IT **Grifola frondosa**  
 (polysaccharides from, antitumor activity of)  
 IT Neoplasm inhibitors  
 (polysaccharides of **Grifola frondosa** as)  
 IT 65431-06-3D, Fucogalactomannan, protein complexes 149315-89-9D, protein complexes  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (from **Grifola frondosa**, antitumor activity of)

L169 ANSWER 20 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1989:433186 HCAPLUS

DOCUMENT NUMBER: 111:33186

TITLE: Antitumor polysaccharides. XII. Immunostimulative antitumor effects of  $\beta$ -D-glucans and chitin substances isolated from some medicinal mushrooms

AUTHOR(S): Mizuno, Takashi; **Kawagishi, Hirokazu**; Ito, Hitoshi; Shimura, Keishiro

CORPORATE SOURCE: Fac. Agric., Shizuoka Univ., Shizuoka, 422, Japan

SOURCE: Shizuoka Daigaku Nogakubu Kenkyu Hokoku (1988), (38), 29-35

CODEN: SDNKAA; ISSN: 0559-8850

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB The polysaccharides  $\beta$ -D-glucans isolated from water or 5% NaOH exts. of *Ganoderma lucidum*, **Grifola frondosa**, and *Agaricus blazei* had antitumor effects in mice against sarcoma 180. Chitosan prepns. obtained from the above 3 mushrooms and com. chitin substances from crab crusts did not have antitumor effects.

CC 1-6 (Pharmacology)

IT *Agaricus blazei*

*Ganoderma lucidum*

**Grifola frondosa**

(chitins and glucans of, antitumor effect of)

L169 ANSWER 21 OF 22 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1987:464715 HCAPLUS

DOCUMENT NUMBER: 107:64715

TITLE: Studies on the host-mediated antitumor polysaccharides. XI. Fractionation, characterization and formolysis of antitumor fibrous polysaccharides (noncellulose) from **Maitake**, the fruiting body of **Grifola frondosa**

AUTHOR(S): Mizuno, Takashi; **Kawagishi, Hirokazu**;

Mizuno, Kiyoshi  
 CORPORATE SOURCE: Fac. Agric., Shizuoka Univ., Shizuoka, 836, Japan  
 SOURCE: Shizuoka Daigaku Nogakubu Kenkyu Hokoku (1986), (36),  
 85-91  
 CODEN: SDNKAA; ISSN: 0559-8850  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese  
 AB Noncellulose fibrous  $\beta$ -glycan in cultivated **Maitake**,  
 fruiting body of *G. frondosa*, and their antitumor activity were examined  
 After extraction with 85% EtOH (80°), H<sub>2</sub>O (100°), 3% ammonium  
 oxalate (100°) and 5% NaOH (30°), the residue was extracted with  
 5% NaOH containing 0.1% NaBH<sub>4</sub> (80°), 20% NaOH containing 0.1% NaH<sub>4</sub>  
 (30°) and 5% LiCl solution in N,N'-dimethylacetamide (70°) to  
 obtain polysaccharide fractions, A, B and C, resp., however, no material  
 was extracted in B. AcOH and EtOH precipitation of A gave two  $\beta$ -glucans (I  
 and  
 II, resp.), and gel-filtration of C using Sepharose CL-4B eluted with 0.8M  
 NaOH gave a chitosan (III). I-III were treated with 80% formic acid at  
 85° for 40-60 min to afford corresponding formyl polysaccharides  
 and low-mol. weight polysaccharides. I and II were composed of glucose (Glc)  
 as the main sugar and small amount of xylose and fucose, consisted of  
 $\beta$ -(1 $\rightarrow$ 3)-D-glucan branched with  $\beta$ -(1 $\rightarrow$ 6)-linkage  
 with 4 Glc residues and average chain length of 8 and had average mol. weight  
 750,000  
 and 430,000, resp. III gave mainly glucosamine (95.4%) and a small amount  
 of Glc by acid hydrolysis and was identified as chitosan by IR spectra and  
 x-ray anal. II and low-mol. weight polysaccharides of I and II demonstrated  
 host-mediated antitumor activity against Sarcoma 180 in mice on i.p.  
 administration with ID<sub>50</sub> 48.5, 40.1 and 18.0 mg/kg, resp.  
 CC 63-4 (Pharmaceuticals)  
 Section cross-reference(s): 1, 11  
 ST **Maitake** polysaccharide antitumor; **Grifola**  
 polysaccharide antitumor  
 IT Polysaccharides, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
 (Uses)  
 (of **Grifola frondosa** fruit, antitumor activity of)  
 IT **Grifola frondosa**  
 (polysaccharides of, extraction and antitumor activity of)  
 IT Neoplasm inhibitors  
 (**Grifola frondosa** polysaccharides)  
 IT 9012-76-4, Chitosan 9051-97-2D, derivs.  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
 (Uses)  
 (of **Grifola frondosa** fruit, antitumor activity of)

L169 ANSWER 22 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 2002155867 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 11874441  
 TITLE: Effects of a water-soluble extract of **maitake**  
 mushroom on circulating glucose/insulin concentrations in  
 KK mice.  
 AUTHOR: Manohar V; Talpur N A; Echard B W; Lieberman S; Preuss  
 H G  
 CORPORATE SOURCE: Department of Physiology, Georgetown University Medical

SOURCE: Center, Washington, DC 20007, USA.  
Diabetes, obesity & metabolism, (2002 Jan) Vol. 4, No. 1,  
pp. 43-8.  
Journal code: 100883645. ISSN: 1462-8902.  
PUB. COUNTRY: England: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200204  
ENTRY DATE: Entered STN: 13 Mar 2002  
Last Updated on STN: 4 Apr 2002  
Entered Medline: 3 Apr 2002

## ABSTRACT:

AIM: We examined benefits of a water-soluble extract of **maitake** mushroom designated as Fraction X (FXM) on the glucose/insulin metabolism of insulin-resistant KK mice, and compared the results of FXM with those of a sulphonylurea, Glipizide. DESIGN: In several acute studies, insulin-resistant KK mice were gavaged with a single dose of varying concentrations of FXM, or a single dose of one concentration of the oral hypoglycaemic drug, Glipizide. In the one chronic study, KK mice were gavaged with FXM, Glipizide, or an equal volume of isotonic saline (baseline control) twice daily. Retro-orbital blood was drawn on the morning of the 4th and 7th days before the early gavage. Blood glucose was measured by routine laboratory procedures, and serum insulin was estimated by a radioimmunoassay (RIA) assay developed specifically for rodents. RESULTS: At a dose of FXM (140 mg/mouse), a statistically significant lowering of circulating glucose concentrations was again seen at 8-12 h and 16-18 h after oral gavage. The lowering approximated 25% of the original concentration. Oral gavage of Glipizide resulted in statistically significantly lower values of circulating glucose (25-37% lower compared with baseline) at 8-24 h post dosing. In the chronic study, the circulating concentrations of glucose and insulin of mice taking 140 mg FXM per day were decreased significantly at days 4 and 7. CONCLUSIONS: FXM, a natural extract obtained from **maitake** mushroom, favourably influences glucose/insulin metabolism in insulin-resistant KK mice. The lowering of both circulating glucose and insulin concentrations suggests that FXM works primarily by enhancing peripheral insulin sensitivity.

CONTROLLED TERM: \*Agaricales  
Animals  
\*Blood Glucose: ME, metabolism  
Comparative Study  
\*Diabetes Mellitus: DT, drug therapy  
\*Glipizide: PD, pharmacology  
\*Glucans: PD, pharmacology  
Hypoglycemic Agents: PD, pharmacology  
\*Insulin: BL, blood  
Insulin Resistance: PH, physiology  
Mice  
Mice, Inbred Strains  
\*Phytotherapy  
\*Plant Extracts: PD, pharmacology  
CAS REGISTRY NO.: 11061-68-0 (Insulin); 29094-61-9 (Glipizide)  
CHEMICAL NAME: 0 (Blood Glucose); 0 (Glucans); 0 (Hypoglycemic Agents); 0 (Plant Extracts)

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L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT,OLD,UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L7	110962	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/OBI
L19	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L7

=&gt; d que L49

L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT,OLD,UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L7	110962	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/OBI
L19	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L7
L47	1093132	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	EXTRACT?/BI
L49	13	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L19 AND L47

=&gt; d que L54

L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT,OLD,UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)

L7	110962	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/OBI
L19	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L7
L47	1093132	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	EXTRACT?/BI
L49	13	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L19 AND L47
L50	214354	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHANOL?/OBI
L51	279379	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHANOL?/BI
L52	31588	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHYL ALCOHOL?/OBI
L53	34574	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHYL ALCOHOL?/BI
L54	2	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L50 OR L51 OR L52 OR L53) AND (L19 OR L49)

=&gt; d que L38

L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT,OLD,UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L8	21998	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIDIABETIC?/OBI
L9	32219	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIHYPERTENSIVE?/OBI
L10	7461	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIOBESITY?/OBI
L11	11551	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPOLIPEMIC?/OBI
L12	497	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIHYPERLIPID?/OBI
L13	65053	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L8 OR L9 OR L10 OR L11 OR L12)
L22	11582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPOLIPEM?/OBI
L23	62013	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPERTENS?/OBI
L24	50378	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BLOOD PRESS?/OBI
L25	30252	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	OBES?/OBI
L26	23975	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BODY WEIGHT/OBI
L27	14852	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BIOACTIV?/OBI
L28	169554	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L22 OR L23 OR L24 OR L25 OR L26 OR L27)
L29	23	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L28 AND L5
L31	2391101	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?PROTEIN?/BI
L32	357876	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?SACCHAR?/BI
L34	25	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L13
L35	36	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L29 OR L34
L37	118968	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L31 AND L32
L38	3	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L37 AND L35

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L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT,OLD,UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L7	110962	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/OBI
L19	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L7
L31	2391101	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?PROTEIN?/BI
L32	357876	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?SACCHAR?/BI
L40	44	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L31 AND L32
L47	1093132	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	EXTRACT?/BI
L55	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L40 AND L47
L56	12	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L55 NOT L19

=&gt; d que L60

L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT, OLD, UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L27	14852	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BIOACTIV?/OBI
L47	1093132	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	EXTRACT?/BI
L58	6	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L27
L59	650480	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	PURIF?/OBI OR ISOLAT?/OBI
L60	3	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L59 OR L47) AND L58

=&gt; d que L69

L8	21998	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIDIABETIC?/OBI
L9	32219	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIHYPERTENSIVE?/OBI
L10	7461	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIOBESITY?/OBI
L11	11551	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPOLIPEMIC?/OBI
L12	497	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTHYPERLIPID?/OBI
L22	11582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPOLIPEM?/OBI
L23	62013	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPERTENS?/OBI
L24	50378	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BLOOD PRESS?/OBI
L25	30252	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	OBES?/OBI
L26	23975	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BODY WEIGHT/OBI
L66	91828	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/CW
L67	4489	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L66 (L) THU/RL
L69	11	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L67 (L) ((L8 OR L9 OR L10 OR L11 OR L12) OR (L22 OR L23 OR L24 OR L25 OR L26))

=&gt; d que L152

L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT, OLD, UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L7	110962	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/OBI
L8	21998	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIDIABETIC?/OBI
L9	32219	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIHYPERTENSIVE?/OBI
L10	7461	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIOBESITY?/OBI
L11	11551	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPOLIPEMIC?/OBI
L12	497	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTHYPERLIPID?/OBI
L13	65053	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L8 OR L9 OR L10 OR L11 OR L12)
L19	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L7
L22	11582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPOLIPEM?/OBI
L23	62013	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPERTENS?/OBI
L24	50378	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BLOOD PRESS?/OBI
L25	30252	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	OBES?/OBI
L26	23975	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BODY WEIGHT/OBI
L27	14852	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BIOACTIV?/OBI
L28	169554	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L22 OR L23 OR L24 OR L25 OR L26 OR L27)
L29	23	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L28 AND L5
L31	2391101	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?PROTEIN?/BI
L32	357876	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?SACCHAR?/BI
L34	25	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L13

L35	36	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L29 OR L34
L37	118968	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L31 AND L32
L38	3	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L37 AND L35
L40	44	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L31 AND L32
L47	1093132	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	EXTRACT?/BI
L49	13	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L19 AND L47
L50	214354	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHANOL?/OBI
L51	279379	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHANOL?/BI
L52	31588	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHYL ALCOHOL?/OBI
L53	34574	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ETHYL ALCOHOL?/BI
L54	2	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L50 OR L51 OR L52 OR L53) AND (L19 OR L49)
L55	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L40 AND L47
L56	12	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L55 NOT L19
L58	6	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L27
L59	650480	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	PURIF?/OBI OR ISOLAT?/OBI
L60	3	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L59 OR L47) AND L58
L66	91828	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/CW
L67	4489	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L66 (L) THU/RL
L69	11	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L67 (L) ((L8 OR L9 OR L10 OR L11 OR L12) OR (L22 OR L23 OR L24 OR L25 OR L26))
L144	47	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L19 OR L49 OR L54 OR L38 OR L56 OR L60 OR L69
L148	122674	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MOLECULAR WEIGHT/OBI
L149	98780	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	RATIO/OBI
L150	552714	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MOLECULAR WEIGHT/BI
L151		QUE	ABB=ON	PLU=ON	RATIO/BI	
L152	12	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L148 OR L149 OR L150 OR L151) AND L144

=> d que L163

L1	525	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA/OBI
L2	493	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GRIFOLA+NT, OLD, UF/CT
L3	92	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	MAITAKE/OBI
L4	578	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(GRIFOLA OR MAITAKE)/BI
L5	582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L7	110962	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GLYCOPROTEIN?/OBI
L8	21998	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIDIABETIC?/OBI
L9	32219	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIHYPERTENSIVE?/OBI
L10	7461	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIOBESITY?/OBI
L11	11551	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPOLIPEMIC?/OBI
L12	497	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANTIHYPERLIPID?/OBI
L13	65053	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L8 OR L9 OR L10 OR L11 OR L12)
L19	21	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L7
L22	11582	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPOLIPEM?/OBI
L23	62013	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	HYPERTENS?/OBI
L24	50378	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BLOOD PRESS?/OBI
L25	30252	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	OBES?/OBI
L26	23975	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BODY WEIGHT/OBI
L27	14852	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BIOACTIV?/OBI
L28	169554	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L22 OR L23 OR L24 OR L25 OR L26 OR L27)
L29	23	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L28 AND L5
L31	2391101	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?PROTEIN?/BI
L32	357876	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	?SACCHAR?/BI
L34	25	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L5 AND L13
L35	36	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L29 OR L34

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L37      118968 SEA FILE=HCAPLUS ABB=ON PLU=ON L31 AND L32
L38      3 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 AND L35
L40      44 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND L31 AND L32
L47      1093132 SEA FILE=HCAPLUS ABB=ON PLU=ON EXTRACT?/BI
L49      13 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 AND L47
L50      214354 SEA FILE=HCAPLUS ABB=ON PLU=ON ETHANOL?/OBI
L51      279379 SEA FILE=HCAPLUS ABB=ON PLU=ON ETHANOL?/BI
L52      31588 SEA FILE=HCAPLUS ABB=ON PLU=ON ETHYL ALCOHOL?/OBI
L53      34574 SEA FILE=HCAPLUS ABB=ON PLU=ON ETHYL ALCOHOL?/BI
L54      2 SEA FILE=HCAPLUS ABB=ON PLU=ON (L50 OR L51 OR L52 OR L53)
        AND (L19 OR L49)
L55      21 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 AND L47
L56      12 SEA FILE=HCAPLUS ABB=ON PLU=ON L55 NOT L19
L58      6 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND L27
L59      650480 SEA FILE=HCAPLUS ABB=ON PLU=ON PURIF?/OBI OR ISOLAT?/OBI
L60      3 SEA FILE=HCAPLUS ABB=ON PLU=ON (L59 OR L47) AND L58
L66      91828 SEA FILE=HCAPLUS ABB=ON PLU=ON GLYCOPROTEIN?/CW
L67      4489 SEA FILE=HCAPLUS ABB=ON PLU=ON L66 (L) THU/RL
L69      11 SEA FILE=HCAPLUS ABB=ON PLU=ON L67 (L) ((L8 OR L9 OR L10 OR
        L11 OR L12) OR (L22 OR L23 OR L24 OR L25 OR L26))
L144     47 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 OR L49 OR L54 OR L38 OR
        L56 OR L60 OR L69
L162     QUE ABB=ON PLU=ON (?EXTRACT? OR ?PURIF? OR ?ISOLAT?)/B
        I
L163     37 SEA FILE=HCAPLUS ABB=ON PLU=ON L144 AND L162

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=> d que L61

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L1      525 SEA FILE=HCAPLUS ABB=ON PLU=ON GRIFOLA/OBI
L2      493 SEA FILE=HCAPLUS ABB=ON PLU=ON GRIFOLA+NT,OLD,UF/CT
L3      92 SEA FILE=HCAPLUS ABB=ON PLU=ON MAITAKE/OBI
L4      578 SEA FILE=HCAPLUS ABB=ON PLU=ON (GRIFOLA OR MAITAKE)/BI
L5      582 SEA FILE=HCAPLUS ABB=ON PLU=ON (L1 OR L2 OR L3 OR L4)
L31     2391101 SEA FILE=HCAPLUS ABB=ON PLU=ON ?PROTEIN?/BI
L32     357876 SEA FILE=HCAPLUS ABB=ON PLU=ON ?SACCHAR?/BI
L40     44 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND L31 AND L32
L47     1093132 SEA FILE=HCAPLUS ABB=ON PLU=ON EXTRACT?/BI
L50     214354 SEA FILE=HCAPLUS ABB=ON PLU=ON ETHANOL?/OBI
L51     279379 SEA FILE=HCAPLUS ABB=ON PLU=ON ETHANOL?/BI
L52     31588 SEA FILE=HCAPLUS ABB=ON PLU=ON ETHYL ALCOHOL?/OBI
L53     34574 SEA FILE=HCAPLUS ABB=ON PLU=ON ETHYL ALCOHOL?/BI
L55     21 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 AND L47
L61     6 SEA FILE=HCAPLUS ABB=ON PLU=ON L55 AND (L50 OR L51 OR L52 OR
        L53)

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=> s (L19 or L49 or L54 or L38 or L56 or L60 or L69 or L152 or L163 or L61) not L166

L170 45 (L19 OR L49 OR L54 OR L38 OR L56 OR L60 OR L69 OR L152 OR L163  
OR L61) NOT L166

*printed with author search*

=> file medline

FILE 'MEDLINE' ENTERED AT 11:14:05 ON 03 MAY 2006

FILE LAST UPDATED: 2 MAY 2006 (20060502/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).

See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)  
[http://www.nlm.nih.gov/pubs/techbull/nd05/nd05\\_med\\_data\\_changes.html](http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html)  
[http://www.nlm.nih.gov/pubs/techbull/nd05/nd05\\_2006\\_MeSH.html](http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html)

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que L79

L73	104	SEA FILE=MEDLINE	ABB=ON	PLU=ON	GRIFOLA
L74	13	SEA FILE=MEDLINE	ABB=ON	PLU=ON	GRIFOLA+NT/CT
L75	54	SEA FILE=MEDLINE	ABB=ON	PLU=ON	MAITAKE
L76	118	SEA FILE=MEDLINE	ABB=ON	PLU=ON	(L73 OR L74 OR L75)
L77	176797	SEA FILE=MEDLINE	ABB=ON	PLU=ON	?GLYCOPROTEIN?
L78	457076	SEA FILE=MEDLINE	ABB=ON	PLU=ON	GLYCOPROTEINS+NT/CT
L79	10	SEA FILE=MEDLINE	ABB=ON	PLU=ON	L76 AND (L77 OR L78)

=> d que L81

L73	104	SEA FILE=MEDLINE	ABB=ON	PLU=ON	GRIFOLA
L74	13	SEA FILE=MEDLINE	ABB=ON	PLU=ON	GRIFOLA+NT/CT
L75	54	SEA FILE=MEDLINE	ABB=ON	PLU=ON	MAITAKE
L76	118	SEA FILE=MEDLINE	ABB=ON	PLU=ON	(L73 OR L74 OR L75)
L77	176797	SEA FILE=MEDLINE	ABB=ON	PLU=ON	?GLYCOPROTEIN?
L78	457076	SEA FILE=MEDLINE	ABB=ON	PLU=ON	GLYCOPROTEINS+NT/CT
L79	10	SEA FILE=MEDLINE	ABB=ON	PLU=ON	L76 AND (L77 OR L78)
L80	339051	SEA FILE=MEDLINE	ABB=ON	PLU=ON	?EXTRACT?
L81	2	SEA FILE=MEDLINE	ABB=ON	PLU=ON	L79 AND L80

=> d que L84

L73	104	SEA FILE=MEDLINE	ABB=ON	PLU=ON	GRIFOLA
L74	13	SEA FILE=MEDLINE	ABB=ON	PLU=ON	GRIFOLA+NT/CT
L75	54	SEA FILE=MEDLINE	ABB=ON	PLU=ON	MAITAKE
L76	118	SEA FILE=MEDLINE	ABB=ON	PLU=ON	(L73 OR L74 OR L75)
L82	908426	SEA FILE=MEDLINE	ABB=ON	PLU=ON	?DIABET? OR ?HYPERTENS? OR ?HYPOLIPEM? OR OBES? OR ANTIOBES? OR ?HYPERLIPID? OR BLOOD PRESS? OR BODY WEIGHT
L84	15	SEA FILE=MEDLINE	ABB=ON	PLU=ON	L82 AND L76

=> d que L95

L77	176797	SEA FILE=MEDLINE	ABB=ON	PLU=ON	?GLYCOPROTEIN?
L78	457076	SEA FILE=MEDLINE	ABB=ON	PLU=ON	GLYCOPROTEINS+NT/CT
L80	339051	SEA FILE=MEDLINE	ABB=ON	PLU=ON	?EXTRACT?
L82	908426	SEA FILE=MEDLINE	ABB=ON	PLU=ON	?DIABET? OR ?HYPERTENS? OR ?HYPOLIPEM? OR OBES? OR ANTIOBES? OR ?HYPERLIPID? OR BLOOD

L89           63947   PRESS? OR BODY WEIGHT  
 SEA FILE=MEDLINE ABB=ON   PLU=ON   (L77 OR L78) (L) (TU OR PD OR  
 PK OR AD)/CT  
 L92           82526   SEA FILE=MEDLINE ABB=ON   PLU=ON   L82 (L) DT/CT  
 L95           3   SEA FILE=MEDLINE ABB=ON   PLU=ON   L92 AND L89 AND L80

=> d que L102

L73           104   SEA FILE=MEDLINE ABB=ON   PLU=ON   GRIFOLA  
 L74           13   SEA FILE=MEDLINE ABB=ON   PLU=ON   GRIFOLA+NT/CT  
 L75           54   SEA FILE=MEDLINE ABB=ON   PLU=ON   MAITAKE  
 L76           118   SEA FILE=MEDLINE ABB=ON   PLU=ON   (L73 OR L74 OR L75)  
 L77           176797   SEA FILE=MEDLINE ABB=ON   PLU=ON   ?GLYCOPROTEIN?  
 L78           457076   SEA FILE=MEDLINE ABB=ON   PLU=ON   GLYCOPROTEINS+NT/CT  
 L82           908426   SEA FILE=MEDLINE ABB=ON   PLU=ON   ?DIABET? OR ?HYPERTENS? OR  
 ?HYPOLIPEM? OR OBES? OR ANTI OBES? OR ?HYPERLIPID? OR BLOOD  
 PRESS? OR BODY WEIGHT  
 L89           63947   SEA FILE=MEDLINE ABB=ON   PLU=ON   (L77 OR L78) (L) (TU OR PD OR  
 PK OR AD)/CT  
 L92           82526   SEA FILE=MEDLINE ABB=ON   PLU=ON   L82 (L) DT/CT  
 L93           116   SEA FILE=MEDLINE ABB=ON   PLU=ON   L92 AND L89  
 L98           1331   SEA FILE=MEDLINE ABB=ON   PLU=ON   ANTI-OBES?  
 L99           10   SEA FILE=MEDLINE ABB=ON   PLU=ON   (L77 OR L78) AND L98  
 L100          125   SEA FILE=MEDLINE ABB=ON   PLU=ON   L93 OR L99  
 L102          0   SEA FILE=MEDLINE ABB=ON   PLU=ON   L100 AND L76

=> d que L101

L77           176797   SEA FILE=MEDLINE ABB=ON   PLU=ON   ?GLYCOPROTEIN?  
 L78           457076   SEA FILE=MEDLINE ABB=ON   PLU=ON   GLYCOPROTEINS+NT/CT  
 L82           908426   SEA FILE=MEDLINE ABB=ON   PLU=ON   ?DIABET? OR ?HYPERTENS? OR  
 ?HYPOLIPEM? OR OBES? OR ANTI OBES? OR ?HYPERLIPID? OR BLOOD  
 PRESS? OR BODY WEIGHT  
 L86           20281   SEA FILE=MEDLINE ABB=ON   PLU=ON   BIOACTIV? OR BIO ACTIV?  
 L89           63947   SEA FILE=MEDLINE ABB=ON   PLU=ON   (L77 OR L78) (L) (TU OR PD OR  
 PK OR AD)/CT  
 L92           82526   SEA FILE=MEDLINE ABB=ON   PLU=ON   L82 (L) DT/CT  
 L93           116   SEA FILE=MEDLINE ABB=ON   PLU=ON   L92 AND L89  
 L98           1331   SEA FILE=MEDLINE ABB=ON   PLU=ON   ANTI-OBES?  
 L99           10   SEA FILE=MEDLINE ABB=ON   PLU=ON   (L77 OR L78) AND L98  
 L100          125   SEA FILE=MEDLINE ABB=ON   PLU=ON   L93 OR L99  
 L101          2   SEA FILE=MEDLINE ABB=ON   PLU=ON   L100 AND L86

=> d que L104

L77           176797   SEA FILE=MEDLINE ABB=ON   PLU=ON   ?GLYCOPROTEIN?  
 L82           908426   SEA FILE=MEDLINE ABB=ON   PLU=ON   ?DIABET? OR ?HYPERTENS? OR  
 ?HYPOLIPEM? OR OBES? OR ANTI OBES? OR ?HYPERLIPID? OR BLOOD  
 PRESS? OR BODY WEIGHT  
 L92           82526   SEA FILE=MEDLINE ABB=ON   PLU=ON   L82 (L) DT/CT  
 L103          6543   SEA FILE=MEDLINE ABB=ON   PLU=ON   L77 (L) (TO OR PD OR PK OR  
 AD)/CT  
 L104          6   SEA FILE=MEDLINE ABB=ON   PLU=ON   L103 AND L92

=> d que L107

L77 176797 SEA FILE=MEDLINE ABB=ON PLU=ON ?GLYCOPROTEIN?  
 L82 908426 SEA FILE=MEDLINE ABB=ON PLU=ON ?DIABET? OR ?HYPERTENS? OR  
 ?HYPOLIPEM? OR OBES? OR ANTIOBES? OR ?HYPERLIPID? OR BLOOD  
 PRESS? OR BODY WEIGHT  
 L103 6543 SEA FILE=MEDLINE ABB=ON PLU=ON L77 (L) (TO OR PD OR PK OR  
 AD)/CT  
 L106 30353 SEA FILE=MEDLINE ABB=ON PLU=ON L82 (L) (TU OR PD OR PK OR  
 AD)/CT  
 L107 2 SEA FILE=MEDLINE ABB=ON PLU=ON L103 AND L106

=> d que L155

L73 104 SEA FILE=MEDLINE ABB=ON PLU=ON GRIFOLA  
 L74 13 SEA FILE=MEDLINE ABB=ON PLU=ON GRIFOLA+NT/CT  
 L75 54 SEA FILE=MEDLINE ABB=ON PLU=ON MAITAKE  
 L76 118 SEA FILE=MEDLINE ABB=ON PLU=ON (L73 OR L74 OR L75)  
 L77 176797 SEA FILE=MEDLINE ABB=ON PLU=ON ?GLYCOPROTEIN?  
 L78 457076 SEA FILE=MEDLINE ABB=ON PLU=ON GLYCOPROTEINS+NT/CT  
 L79 10 SEA FILE=MEDLINE ABB=ON PLU=ON L76 AND (L77 OR L78)  
 L80 339051 SEA FILE=MEDLINE ABB=ON PLU=ON ?EXTRACT?  
 L81 2 SEA FILE=MEDLINE ABB=ON PLU=ON L79 AND L80  
 L82 908426 SEA FILE=MEDLINE ABB=ON PLU=ON ?DIABET? OR ?HYPERTENS? OR  
 ?HYPOLIPEM? OR OBES? OR ANTIOBES? OR ?HYPERLIPID? OR BLOOD  
 PRESS? OR BODY WEIGHT  
 L84 15 SEA FILE=MEDLINE ABB=ON PLU=ON L82 AND L76  
 L86 20281 SEA FILE=MEDLINE ABB=ON PLU=ON BIOACTIV? OR BIO ACTIV?  
 L89 63947 SEA FILE=MEDLINE ABB=ON PLU=ON (L77 OR L78) (L) (TU OR PD OR  
 PK OR AD)/CT  
 L92 82526 SEA FILE=MEDLINE ABB=ON PLU=ON L82 (L) DT/CT  
 L93 116 SEA FILE=MEDLINE ABB=ON PLU=ON L92 AND L89  
 L95 3 SEA FILE=MEDLINE ABB=ON PLU=ON L92 AND L89 AND L80  
 L98 1331 SEA FILE=MEDLINE ABB=ON PLU=ON ANTI-OBES?  
 L99 10 SEA FILE=MEDLINE ABB=ON PLU=ON (L77 OR L78) AND L98  
 L100 125 SEA FILE=MEDLINE ABB=ON PLU=ON L93 OR L99  
 L101 2 SEA FILE=MEDLINE ABB=ON PLU=ON L100 AND L86  
 L102 0 SEA FILE=MEDLINE ABB=ON PLU=ON L100 AND L76  
 L103 6543 SEA FILE=MEDLINE ABB=ON PLU=ON L77 (L) (TO OR PD OR PK OR  
 AD)/CT  
 L104 6 SEA FILE=MEDLINE ABB=ON PLU=ON L103 AND L92  
 L106 30353 SEA FILE=MEDLINE ABB=ON PLU=ON L82 (L) (TU OR PD OR PK OR  
 AD)/CT  
 L107 2 SEA FILE=MEDLINE ABB=ON PLU=ON L103 AND L106  
 L117 36 SEA FILE=MEDLINE ABB=ON PLU=ON L79 OR L81 OR L84 OR L95 OR  
 (L101 OR L102) OR L104 OR L107  
 L153 196498 SEA FILE=MEDLINE ABB=ON PLU=ON MOLECULAR WEIGHT  
 L154 401681 SEA FILE=MEDLINE ABB=ON PLU=ON RATIO  
 L155 7 SEA FILE=MEDLINE ABB=ON PLU=ON L117 AND (L153 OR L154)

=> s (L79 or L81 or L84 or L95 or L102 or L101 or L104 or L107 or L155) not L167

L171 31 (L79 OR L81 OR L84 OR L95 OR L102 OR L101 OR L104 OR L107 OR  
 L155) NOT L167

*printed with author search*

=> file embase

FILE 'EMBASE' ENTERED AT 11:14:15 ON 03 MAY 2006

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FILE COVERS 1974 TO 2 May 2006 (20060502/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que L124

```
L119      123 SEA FILE=EMBASE ABB=ON  PLU=ON  GRIFOLA
L120      283 SEA FILE=EMBASE ABB=ON  PLU=ON  GRIFOL?
L121       58 SEA FILE=EMBASE ABB=ON  PLU=ON  MAITAKE
L122     97987 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOPROTEIN?
L123    203474 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOPROTEIN+NT/CT
L124      16 SEA FILE=EMBASE ABB=ON  PLU=ON  (L119 OR L120 OR L121) AND
              (L122 OR L123)
```

=> d que L136

```
L122     97987 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOPROTEIN?
L125    718137 SEA FILE=EMBASE ABB=ON  PLU=ON  ?DIABET? OR ?HYPERTENS? OR
              ?HYPOLIPEM? OR OBES? OR ANTI OBES? OR ?HYPERLIPID? OR BLOOD
              PRESS? OR BODY WEIGHT
L126     431 SEA FILE=EMBASE ABB=ON  PLU=ON  ANTI-OBES?
L130    1839 SEA FILE=EMBASE ABB=ON  PLU=ON  L122 (L) (DT OR AD OR DO OR PK
              OR PD)/CT
L132    89883 SEA FILE=EMBASE ABB=ON  PLU=ON  ((L125 OR L126)) (L) DT/CT
L134    66371 SEA FILE=EMBASE ABB=ON  PLU=ON  L132/MAJ
L135     953 SEA FILE=EMBASE ABB=ON  PLU=ON  L130/MAJ
L136      4 SEA FILE=EMBASE ABB=ON  PLU=ON  L134 AND L135
```

=> d que L141

```
L122     97987 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOPROTEIN?
L125    718137 SEA FILE=EMBASE ABB=ON  PLU=ON  ?DIABET? OR ?HYPERTENS? OR
              ?HYPOLIPEM? OR OBES? OR ANTI OBES? OR ?HYPERLIPID? OR BLOOD
              PRESS? OR BODY WEIGHT
L126     431 SEA FILE=EMBASE ABB=ON  PLU=ON  ANTI-OBES?
L130    1839 SEA FILE=EMBASE ABB=ON  PLU=ON  L122 (L) (DT OR AD OR DO OR PK
              OR PD)/CT
L132    89883 SEA FILE=EMBASE ABB=ON  PLU=ON  ((L125 OR L126)) (L) DT/CT
L134    66371 SEA FILE=EMBASE ABB=ON  PLU=ON  L132/MAJ
L135     953 SEA FILE=EMBASE ABB=ON  PLU=ON  L130/MAJ
L139      8 SEA FILE=EMBASE ABB=ON  PLU=ON  L134 AND L130
L140      8 SEA FILE=EMBASE ABB=ON  PLU=ON  L135 AND L132
L141     12 SEA FILE=EMBASE ABB=ON  PLU=ON  (L139 OR L140)
```

=> d que L158

```
L119      123 SEA FILE=EMBASE ABB=ON  PLU=ON  GRIFOLA
L120      283 SEA FILE=EMBASE ABB=ON  PLU=ON  GRIFOL?
L121       58 SEA FILE=EMBASE ABB=ON  PLU=ON  MAITAKE
L122     97987 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOPROTEIN?
L123    203474 SEA FILE=EMBASE ABB=ON  PLU=ON  GLYCOPROTEIN+NT/CT
```

```

L124      16 SEA FILE=EMBASE ABB=ON  PLU=ON  (L119 OR L120 OR L121) AND
          (L122 OR L123)
L125     718137 SEA FILE=EMBASE ABB=ON  PLU=ON  ?DIABET? OR ?HYPERTENS? OR
          ?HYPOLIPEM? OR OBES? OR ANTIOBES? OR ?HYPERLIPID? OR BLOOD
          PRESS? OR BODY WEIGHT
L126      431 SEA FILE=EMBASE ABB=ON  PLU=ON  ANTI-OBES?
L130     1839 SEA FILE=EMBASE ABB=ON  PLU=ON  L122 (L) (DT OR AD OR DO OR PK
          OR PD)/CT
L132     89883 SEA FILE=EMBASE ABB=ON  PLU=ON  ((L125 OR L126)) (L) DT/CT
L134     66371 SEA FILE=EMBASE ABB=ON  PLU=ON  L132/MAJ
L135      953 SEA FILE=EMBASE ABB=ON  PLU=ON  L130/MAJ
L136       4 SEA FILE=EMBASE ABB=ON  PLU=ON  L134 AND L135
L139       8 SEA FILE=EMBASE ABB=ON  PLU=ON  L134 AND L130
L140       8 SEA FILE=EMBASE ABB=ON  PLU=ON  L135 AND L132
L141      12 SEA FILE=EMBASE ABB=ON  PLU=ON  (L139 OR L140)
L143      28 SEA FILE=EMBASE ABB=ON  PLU=ON  L124 OR L136 OR L141
L156    116135 SEA FILE=EMBASE ABB=ON  PLU=ON  MOLECULAR WEIGHT
L157    372380 SEA FILE=EMBASE ABB=ON  PLU=ON  RATIO
L158       3 SEA FILE=EMBASE ABB=ON  PLU=ON  (L156 OR L157) AND L143

```

=> s (L124 or L136 or L141 or L158) not L168

L172 27 (L124 OR L136 OR L141 OR L158) NOT L168

*printed with  
another search*

=> dup rem L170 L171 L172

FILE 'HCAPLUS' ENTERED AT 11:14:39 ON 03 MAY 2006

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FILE 'MEDLINE' ENTERED AT 11:14:39 ON 03 MAY 2006

FILE 'EMBASE' ENTERED AT 11:14:39 ON 03 MAY 2006

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PROCESSING COMPLETED FOR L170

PROCESSING COMPLETED FOR L171

PROCESSING COMPLETED FOR L172

L173 99 DUP REM L170 L171 L172 (4 DUPLICATES REMOVED)

ANSWERS '1-45' FROM FILE HCAPLUS

ANSWERS '46-76' FROM FILE MEDLINE

ANSWERS '77-99' FROM FILE EMBASE

=> d ibib abs hitind L173 1-45; d iall L173 46-99

L173 ANSWER 1 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2004:548967 HCAPLUS

DOCUMENT NUMBER: 141:260962

TITLE: Synthesis and antitumor activities of glucan derivatives

AUTHOR(S): Du, Yuguo; Gu, Guofeng; Hua, Yuxia; Wei, Guohua; Ye, Xinshan; Yu, Guangli

CORPORATE SOURCE: Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, 100085, Peop. Rep. China

SOURCE: Tetrahedron (2004), 60(30), 6345-6351

CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 141:260962

AB A highly efficient and practical method for the preparation of  $\beta$ -D-Glc-(1 $\rightarrow$ 6)-[ $\beta$ -D-Glc-(1 $\rightarrow$ 3)]- $\beta$ -D-Glc-(1 $\rightarrow$ 6)- $\beta$ -D-Glc-(1 $\rightarrow$ 6)-[ $\beta$ -D-Glc-(1 $\rightarrow$ 3)]-D-Glc-OMe was described. A dendritic nona-saccharide was also synthesized. The antitumor activities of hexasaccharide, the dendrimer, their sulfated derivs., together with the natural glucan-protein and the corresponding polysaccharide **isolated** from barmy mycelium of **Grifola frondosa**, were preliminarily investigated based on Sarcoma-180 studies in mice tests. Our results suggest that the sulfated branching oligosaccharide and natural glycoprotein have better antitumor activities comparing to the parent sugar residue (oligosaccharide or polysaccharide).

CC 33-5 (Carbohydrates)

ST dendrimer oligosaccharide polysaccharide Prepn antitumor glucan protein **glycoprotein**

IT Polysaccharides, preparation  
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
 (barmy mycelium of **Grifola frondosa**; synthesis and antitumor activities of glucan dendrimers)

IT Antitumor agents  
**Grifola frondosa**  
 Neoplasm  
 (synthesis and antitumor activities of glucan dendrimers)

IT Dendritic polymers  
**Glycoproteins**  
 Oligosaccharides, preparation  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (synthesis and antitumor activities of glucan dendrimers)

IT 9041-22-9DP,  $\beta$ -D-Glucan, branched 53238-80-5P 753450-31-6DP, protein bound  
 RL: NPO (Natural product occurrence); PAC (Pharmacological activity); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
 (from barmy mycelium of **Grifola frondosa** (**Maitake**); synthesis and antitumor activities of glucan dendrimers)

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 2 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2004:760784 HCAPLUS

DOCUMENT NUMBER: 141:235508

TITLE: Cellular and physiological effects of *Ganoderma lucidum* (Reishi)

AUTHOR(S): Sliva, Daniel

CORPORATE SOURCE: Cancer Research Laboratory, Methodist Research Institute, Clarian Health Partners Inc., Indianapolis, IN, USA

SOURCE: Mini-Reviews in Medicinal Chemistry (2004), 4(8), 873-879  
 CODEN: MMICAE; ISSN: 1389-5575

PUBLISHER: Bentham Science Publishers Ltd.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. In Asia, a variety of dietary products have been used for centuries as popular remedies to prevent or treat different diseases. A large number of herbs and **exts.** from medicinal mushrooms are used

for the treatment of diseases. Mushrooms such as *Ganoderma lucidum* (Reishi), *Lentinus edodes* (Shiitake), *Grifola frondosa* (**Maitake**), *Herichium erinaceum* (Yamabushitake), and *Inonotus obliquus* (Chaga) have been collected and consumed in China, Korea, and Japan for centuries. Until recently, these mushrooms were largely unknown in the West and were considered "fungi" without any nutritional value. However, most mushrooms are rich in vitamins, fiber, and amino acids and low in fat, cholesterol, and calories. These mushrooms contain a large variety of biol. active **polysaccharides** with immunostimulatory properties, which contribute to their anticancer effects. Furthermore, other bioactive substances, including triterpenes, **proteins**, lipids, cerebrosides, and phenols, have been identified and characterized in medicinal mushrooms. This review summarizes the biol. effects of *Ganoderma lucidum* upon specific signaling mols. and pathways, which are responsible for its therapeutic effects.

CC 1-0 (Pharmacology)

REFERENCE COUNT: 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 3 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:351396 HCAPLUS

TITLE: Polycystic ovary syndrome and grislin in **Maitake** mushroom

AUTHOR(S): Anzai, Hideo

CORPORATE SOURCE: Ridgewood, NJ, USA

SOURCE: Aromatopia (2006), 75, 47-52  
CODEN: AROMFS; ISSN: 0918-4295

PUBLISHER: Fureguransu Janarusha

DOCUMENT TYPE: Journal; General Review

LANGUAGE: Japanese

AB A review on the clin. symptoms of polycystic ovary syndrome (PCOS), physiolo. functions of insulin and insulin resistance, diseases caused by insulin resistance, roles of insulin in PCOS, problems in the treatment of PCOS, blood glucose and pressure lowering effects of a glycoprotein (grislin) **extracted** from *Grifola frondosa*, effects of grislin on type 2 diabetes mellitus, and ovulation induction in humans with PCOS by grislin.

CC 1-0 (Pharmacology)

Section cross-reference(s): 2, 14

IT **Glycoproteins**

RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
(grislin; treatment of polycystic ovary syndrome and insulin resistance by grislin from **Maitake** mushroom)

IT Ovary, disease

(polycystic; treatment of polycystic ovary syndrome and insulin resistance by grislin from **Maitake** mushroom)

IT Antidiabetic agents

**Grifola frondosa**

Human

Ovulation induction

(treatment of polycystic ovary syndrome and insulin resistance by grislin from **Maitake** mushroom)

IT 9004-10-8, Insulin

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(resistance; treatment of polycystic ovary syndrome and insulin resistance by grislin from **Maitake** mushroom)

L173 ANSWER 4 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1335277 HCAPLUS

DOCUMENT NUMBER: 144:65954  
 TITLE: Wild-type and mutant Escherichia coli phytases and nucleic acids encoding them and their commercial uses  
 INVENTOR(S): Short, Jay M.; Kretz, Keith A.; Gray, Kevin A.; Barton, Nelson Robert; Garrett, James B.; O'Donoghue, Eileen; Baum, William; Robertson, Dan E.; Zorner, Paul  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 82 pp., Cont.-in-part of U.S. Ser. No. 866,379.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 9  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005281792	A1	20051222	US 2004-933115	20040901
US 5876997	A	19990302	US 1997-910798	19970813
EP 1600505	A1	20051130	EP 2005-13009	19980813
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
US 6110719	A	20000829	US 1999-259214	19990301
US 6190897	B1	20010220	US 1999-291931	19990413
US 6183740	B1	20010206	US 1999-318528	19990525
US 6720014	B1	20040413	US 2000-580515	20000525
US 2002136754	A1	20020926	US 2001-866379	20010524
US 6855365	B2	20050215		
AU 2004205269	A1	20040923	AU 2004-205269	20040826
WO 2006028684	A2	20060316	WO 2005-US29621	20050818
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.:  
 US 1997-910798 A3 19970813  
 US 1999-259214 A1 19990301  
 US 1999-291931 A2 19990413  
 US 1999-318528 A2 19990525  
 US 2000-580515 A2 20000525  
 US 2001-866379 A2 20010524  
 EP 1998-940861 A3 19980813  
 AU 2001-78247 A3 20011005  
 US 2004-933115 A 20040901

AB In one aspect, the invention provides a **purified** and modified phytase enzyme from Escherichia coli K12 appA phytase. The modified enzyme comprises 8 amino acid substitutions (W68E/Q84W/A95P/K97C/S168E/R181Y/N226C/Y277D) and has phytase activity and improved thermal tolerance as compared with the wild-type enzyme. In addition, the enzyme has improved protease stability at low pH. Glycosylation of the modified phytase provides a further improved enzyme having improved thermal tolerance and protease stability. The enzyme can be produced from native or recombinant host cells and can be used to aid in the digestion of phytate where

desired. In one aspect, the phytase of the present invention can be used in foodstuffs to improve the feeding value of phytate-rich ingredients.

IC ICM A61K045-00  
ICS C12N009-16; A61K038-46  
INCL 424093450; 424094600  
CC 7-2 (Enzymes)  
Section cross-reference(s): 1, 3, 9, 10, 17, 19  
IT Wastewater treatment  
Water purification  
(degrading phytic acid; wild-type and mutant Escherichia coli phytases and nucleic acids encoding them and their com. uses)  
IT **Proteins**  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(egg, formulation containing; wild-type and mutant Escherichia coli phytases and nucleic acids encoding them and their com. uses)  
IT Citrus paradisi  
Silybum marianum  
(**extract**, formulation containing; wild-type and mutant Escherichia coli phytases and nucleic acids encoding them and their com. uses)  
IT Embryophyta  
Plants  
(**exts.**, formulation containing; wild-type and mutant Escherichia coli phytases and nucleic acids encoding them and their com. uses)  
IT Acacia greggii  
Acanthopanax senticosus  
Agropyron  
Algae  
Allium sativum  
Aloe barbadensis  
Angelica sinensis  
Astragalus  
Bacillus (bacterium genus)  
Bacillus coagulans  
Bifidobacterium  
Bifidobacterium bifidum  
Black cohosh  
Bran  
Brewers' yeast  
Carica papaya  
Cassia  
Centella asiatica  
Chlorella  
Daphnia salina  
Dioscorea  
Echinacea  
Enterococcus  
Equisetum  
Escherichia  
Eucalyptus  
Ginkgo biloba  
Glycine max  
**Grifola frondosa**  
Herb  
Hordeum  
Hydrastis  
Lactobacillus  
Lactobacillus acidophilus  
Lactobacillus casei  
Lactobacillus plantarum  
Lactobacillus rhamnosus

Lentinula edodes  
 Lepidium peruvianum  
 Leuzea  
 Malpighia  
 Medicago sativa  
 Morinda citrifolia  
 Mushroom  
 Panax  
 Panax quinquefolium  
 Parthenium hysterophorus  
 Petroselinum crispum  
 Pfaffia paniculata  
 Propolis  
 Pygeum  
 Rhodiola  
 Rhodymenia  
 Royal jelly

**Saccharomyces**

Salix  
 Schisandra  
 Seaweed  
 Serenoa repens  
 Smilax  
 Spirulina  
 Streptococcus thermophilus  
 Tabebuia  
 Vaccinium myrtillus  
 Wheat bran  
 Whey  
 Yucca  
 Zingiber officinale

(formulation containing; wild-type and mutant Escherichia coli phytases and nucleic acids encoding them and their com. uses)

IT **Proteins**

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (milk, formulation containing; wild-type and mutant Escherichia coli phytases and nucleic acids encoding them and their com. uses)

IT **Proteins**

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (rice, formulation containing; wild-type and mutant Escherichia coli phytases and nucleic acids encoding them and their com. uses)

IT **Proteins**

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (soybean, formulation containing; wild-type and mutant Escherichia coli phytases and nucleic acids encoding them and their com. uses)

IT **Antiosteoporotic agents**

DNA sequences  
 Escherichia coli  
 Feed additives  
 Immobilization, molecular or cellular  
 Mutagenesis

**Protein engineering**

**Protein sequences**

(wild-type and mutant Escherichia coli phytases and nucleic acids encoding them and their com. uses)

IT 50-14-6, Vitamin D2 50-81-7, Vitamin C, biological studies 50-99-7, D-Glucose, biological studies 52-90-4, L-Cysteine, biological studies 56-40-6, Glycine, biological studies 56-41-7, L-Alanine, biological studies 56-45-1, L-Serine, biological studies 56-84-8, L-Aspartic acid, biological studies 56-85-9, L-Glutamine, biological studies

56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 58-85-5, Biotin 59-30-3, Folic acid, biological studies 59-43-8, Thiamin, biological studies 59-67-6, Nicotinic acid, biological studies 60-18-4, L-Tyrosine, biological studies 61-90-5, L-Leucine, biological studies 62-49-7, Choline 63-68-3, L-Methionine, biological studies 63-91-2, L-Phenylalanine, biological studies 65-23-6, Pyridoxine 67-97-0, Vitamin D3 68-19-9, Cyanocobalamin 70-47-3, L-Asparagine, biological studies 71-00-1, L-Histidine, biological studies 72-18-4, L-Valine, biological studies 72-19-5, L-Threonine, biological studies 73-22-3, L-Tryptophan, biological studies 73-31-4, Melatonin 73-32-5, L-Isoleucine, biological studies 74-79-3, L-Arginine, biological studies 79-83-4, Pantothenic acid 83-88-5, Riboflavin, biological studies 87-89-8, Inositol 107-35-7, Taurine 117-39-5, Quercitin 147-85-3, L-Proline, biological studies 150-13-0, PABA 303-98-0, Coenzyme Q10 520-91-2, Vitamin D1 1200-22-2,  $\alpha$ -Lipoic acid 1340-08-5, Vitamin P 1406-16-2, Vitamin D 1406-18-4, Vitamin E 3416-24-8, Glucosamine 7235-40-7,  $\beta$ -Carotene 7429-90-5, Aluminum, biological studies 7429-91-6, Dysprosium, biological studies 7439-88-5, Iridium, biological studies 7439-89-6, Iron, biological studies 7439-91-0, Lanthanum, biological studies 7439-93-2, Lithium, biological studies 7439-94-3, Lutetium, biological studies 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies 7439-98-7, Molybdenum, biological studies 7440-00-8, Neodymium, biological studies 7440-02-0, Nickel, biological studies 7440-03-1, Niobium, biological studies 7440-04-2, Osmium, biological studies 7440-05-3, Palladium, biological studies 7440-06-4, Platinum, biological studies 7440-09-7, Potassium, biological studies 7440-10-0, Praseodymium, biological studies 7440-12-2, Promethium, biological studies 7440-15-5, Rhenium, biological studies 7440-16-6, Rhodium, biological studies 7440-17-7, Rubidium, biological studies 7440-18-8, Ruthenium, biological studies 7440-19-9, Samarium, biological studies 7440-20-2, Scandium, biological studies 7440-21-3, Silicon, biological studies 7440-22-4, Silver, biological studies 7440-23-5, Sodium, biological studies 7440-24-6, Strontium, biological studies 7440-25-7, Tantalum, biological studies 7440-27-9, Terbium, biological studies 7440-29-1, Thorium, biological studies 7440-30-4, Thulium, biological studies 7440-31-5, Tin, biological studies 7440-32-6, Titanium, biological studies 7440-33-7, Tungsten, biological studies 7440-36-0, Antimony, biological studies 7440-39-3, Barium, biological studies 7440-41-7, Beryllium, biological studies 7440-42-8, Boron, biological studies 7440-43-9, Cadmium, biological studies 7440-45-1, Cerium, biological studies 7440-46-2, Cesium, biological studies 7440-47-3, Chromium, biological studies 7440-48-4, Cobalt, biological studies 7440-50-8, Copper, biological studies 7440-52-0, Erbium, biological studies 7440-53-1, Europium, biological studies 7440-54-2, Gadolinium, biological studies 7440-55-3, Gallium, biological studies 7440-56-4, Germanium, biological studies 7440-57-5, Gold, biological studies 7440-58-6, Hafnium, biological studies 7440-60-0, Holmium, biological studies 7440-62-2, Vanadium, biological studies 7440-64-4, Ytterbium, biological studies 7440-65-5, Yttrium, biological studies 7440-66-6, Zinc, biological studies 7440-67-7, Zirconium, biological studies 7440-69-9, Bismuth, biological studies 7440-70-2, Calcium, biological studies 7440-74-6, Indium, biological studies 7553-56-2, Iodine, biological studies 7704-34-9, Sulfur, biological studies 7723-14-0, Phosphorus, biological studies 7726-95-6, Bromine, biological studies 7782-41-4, Fluorine, biological studies 7782-49-2, Selenium, biological studies 8049-47-6, Pancreatin 8063-16-9, Psyllium 9000-82-2, Acetylcysteine 9000-92-4, Amylase 9001-09-6, Chymopapain 9001-42-7, Maltase 9001-54-1, Hyaluronidase 9001-57-4, Invertase 9001-62-1, Lipase 9001-73-4, Papain 9001-75-6, Pepsin 9001-90-5,

Plasmin 9001-92-7, **Proteinase** 9001-98-3, Rennin 9007-27-6,  
 Chondroitin 9012-54-8, Cellulase 9013-93-8, Phospholipase 9015-75-2,  
 Pectate lyase 9025-35-8 9025-37-0, Endo-1,3- $\beta$ -Glucanase  
 9025-43-8 9025-56-3, Hemicellulase 9025-98-3, Pectin esterase  
 9031-11-2, Lactase 9032-08-0, Glucoamylase 9032-75-1, Pectinase  
 9033-35-6, Pectin lyase 9074-98-0 9075-84-7, Endo-1,3- $\alpha$ -  
 Glucanase 10043-52-4, Calcium chloride, biological studies 11032-49-8,  
 Vitamin K2 11104-38-4, Vitamin K1 12001-79-5, Vitamin K 13494-80-9,  
 Tellurium, biological studies 16887-00-6, Chloride, biological studies  
 16984-48-8, Fluoride, biological studies 24959-67-9, Bromide, biological  
 studies 37278-89-0, Xylanase 37288-49-6, endo-1,2- $\beta$ -Glucanase  
 37288-58-7, Exo-poly- $\alpha$ -Galacturonosidase 37325-54-5, Arabinanase  
 37332-39-1, Arabinoxylanase 39346-28-6, Galactanase 51377-41-4,  
 Cutinase 58182-40-4, Arabinogalactan endo-1,4- $\beta$ -galactosidase  
 60748-69-8, Mannanase 62213-14-3,  $\beta$ -1,3(4)-Endoglucanase  
 62213-17-6, Arabinogalactan endo-1,3- $\beta$ -galactosidase 74191-29-0,  
 Endoglucanase 125858-89-1, Xylosidase 131384-64-0, Rhamnogalacturonase  
 148093-36-1, Rhamnogalacturonan acetyl esterase 150977-36-9, Bromelain  
 158886-11-4, Rhamnogalacturonan- $\alpha$ -rhamnosidase 188959-24-2, Xylan  
 acetyl esterase

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(formulation containing; wild-type and mutant Escherichia coli phytases and  
 nucleic acids encoding them and their com. uses)

L173 ANSWER 5 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:547044 HCAPLUS

DOCUMENT NUMBER: 143:76253

TITLE: cDNA microarray technology identifies obesity-related  
 gene expression profiles in fat tissue, which may be  
 useful for development of obesity treatments in humans

INVENTOR(S): Clerc, Roger G.; Duchateau-Nguyen, Guillemette;  
 Gardes, Christophe; Mizrahi, Jacques; Ostenson,  
 Claes-Goran

PATENT ASSIGNEE(S): Switz.

SOURCE: U.S. Pat. Appl. Publ., 21 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005136465	A1	20050623	US 2004-19829	20041222
EP 1548445	A2	20050629	EP 2004-29641	20041215
EP 1548445	A3	20051123		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK,  
 BA, HR, IS, YU

CA 2487098	AA	20050622	CA 2004-2487098	20041221
JP 2005176846	A2	20050707	JP 2004-370470	20041222
CN 1661110	A	20050831	CN 2004-10104569	20041222

PRIORITY APPLN. INFO.: EP 2003-104902 A 20031222

AB The present invention relates to novel targets for identifying compds.  
 that may be useful for the prevention and treatment of obesity. CDNA  
 microarray anal., using RNA **extracted** from human fat tissue, was  
 performed to identify obesity-related changes in gene expression profiles.  
 A total of 146 candidate gene or protein sequences were identified. The  
 goal of this work is to develop preventions or treatments for obesity in  
 humans.

IC ICM C12Q001-68

INCL 435006000

CC 14-14 (Mammalian Pathological Biochemistry)

Section cross-reference(s): 1, 3, 6, 7

IT **Glycoproteins**

RL: BSU (Biological study, unclassified); PRP (Properties); **THU**

(**Therapeutic use**); BIOL (Biological study); USES (Uses)

(ZAG (zinc- $\alpha$ 2-glycoprotein); cDNA microarray technol. identifies **obesity**-related gene expression profiles in fat tissue, which may be useful for development of **obesity** treatments in humans)

L173 ANSWER 6 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:992553 HCAPLUS

DOCUMENT NUMBER: 144:121062

TITLE: Doxorubicin coupled to lactosaminated albumin inhibits the growth of hepatocellular carcinomas induced in rats by diethylnitrosamine

AUTHOR(S): Fiume, Luigi; Bolondi, Luigi; Busi, Corrado; Chieco, Pasquale; Kratz, Felix; Lanza, Marcella; Mattioli, Alessandro; Di Stefano, Giuseppina

CORPORATE SOURCE: Department of Experimental Pathology, University of Bologna, Bologna, 14 40126, Italy

SOURCE: Journal of Hepatology (2005), 43(4), 645-652

CODEN: JOHEEC; ISSN: 0168-8278

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Background/Aims: The hepatocyte receptor for asialoglycoproteins internalizes galactosyl terminating macromols. which can be used as hepatotropic drug carriers. Since this receptor is also expressed on the cells of well differentiated human hepatocellular carcinomas (HCCs), we studied whether conjugation of doxorubicin (DOXO) with lactosaminated human albumin (L-HSA) increases the drug efficacy on HCCs induced in rats by diethylnitrosamine (DENA). Methods: DENA was given in the drinking water for 8 wk. One week after the last day of DENA administration, animals were randomly assigned to three groups. Each group was administered with either saline, free or coupled DOXO (1  $\mu$ g/g). Rats received 4 weekly i.v. injections. One week after the last administration, rats were killed and HCC development was evaluated by counting the tumor nodules on the surface of hepatic lobes. Results: In rats treated with L-HSA coupled DOXO the number of neoplastic nodules was significantly lower ( $P < 0.05$ ) than that counted in animals injected with saline or with free DOXO. Coupled DOXO did not decrease body rat weight, which was markedly reduced by the free drug. Conclusions: Conjugation with L-HSA increased the antineoplastic efficacy and decreased the systemic toxicity of DOXO administered to rats with HCCs produced by DENA.

CC 1-6 (Pharmacology)

IT **Glycoproteins**

RL: PAC (Pharmacological activity); **THU** (**Therapeutic use**); BIOL (Biological study); USES (Uses)

(neoglycoproteins, galactosyl terminating; galactosyl terminating neoglycoprotein L-HSA with DOXO showed anticancer activity by reducing hepatocellular carcinoma nodules and showed no decrease in **body weight** in hepatocellular carcinoma)

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 7 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:585233 HCAPLUS

DOCUMENT NUMBER: 143:266216  
 TITLE: Formulation and in vitro/in vivo evaluation of combining DNA repair and immune enhancing nutritional supplements  
 AUTHOR(S): Pero, R. W.; Amiri, A.; Sheng, Y.; Welther, M.; Rich, M.  
 CORPORATE SOURCE: Department of Cell and Molecular Biology, Section for Tumor Immunology, University of Lund, Lund, Swed.  
 SOURCE: Phytomedicine (2005), 12(4), 255-263  
 CODEN: PYTOEY; ISSN: 0944-7113  
 PUBLISHER: Elsevier GmbH  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Combining nutritional supplements to achieve synergistic benefit is a common practice in the nutraceutical industry. However, establishing added health benefit from a combination of natural ingredients is often assumed, untested and without regard to the principle of metabolic competition between the active components. Here, we report on the combination of a cat's claw water **extract** (C-Med-100, carboxy alkyl esters = active ingredients) + medicinal mushroom **exts.** (*Cordyceps sinensis*, *Grifola blazei*, *Grifola frondosa*, *Trametes versicolor* and *Ganoderma lucidum*, **polysaccharides** = active ingredients) + nicotinamide + zinc into a formulation designed to optimize different modes of immunostimulatory action, and yet that would avoid metabolic antioxidant competition yielding less than expected efficacious effects. Isobole curve analyses of these two active classes of ingredients determined by growth inhibition of HL-60 human leukemic cells in vitro confirmed they were indeed synergistic when in combination, and not metabolically competitive. Furthermore, an in vivo study showed significant health benefit for 14 subjects treated for 4 wk with the unique C-Med-100/mushroom **extract** formulation in that they had reduced pain, reduced fatigue, weight loss and a reduced presence of DNA damage in peripheral blood assessed by (8-OH) guanine DNA adducts and elevation in serum **protein** thiols. Because this broad-based panel of clin. parameters indicating clin. efficacy has never been demonstrated before for either of the active ingredients evaluated alone in humans, these data were taken as strong evidence that the combination of C-Med-100 + mushroom **exts.** + nicotinamide + zinc gave additive or synergistic effects to health benefit, and thus supported no efficacious limits from metabolic competition regarding this particular formulation.

CC 18-7 (Animal Nutrition)  
 Section cross-reference(s): 1, 13

IT *Uncaria tomentosa*  
 (aqueous **extract**, C-Med-100; formulation and in vitro/in vivo evaluation of combining DNA repair and immune enhancing nutritional supplements)

IT Mushroom  
 (**exts.** formula; formulation and in vitro/in vivo evaluation of combining DNA repair and immune enhancing nutritional supplements)

IT **Body weight**  
 (loss; formulation and in vitro/in vivo evaluation of combining DNA repair and immune enhancing nutritional supplements)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 8 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1269742 HCAPLUS

DOCUMENT NUMBER: 144:337685

TITLE: Physical and chemical properties and chemical

structure of polysaccharide fraction PGF-2 from **Grifola frondosa**

AUTHOR(S): Li, Xiaoding; Ouyang, Tianzhi; Rong, Jianhua; Wu, Moucheng

CORPORATE SOURCE: College of Food Science and Technology, Huazhong Agricultural University, Wuhan, 430070, Peop. Rep. China

SOURCE: Junwu Xuebao (2005), 24(2), 245-250  
CODEN: JXUJAE; ISSN: 1672-6472

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The phys. and chemical properties and chemical structure of a polysaccharide fraction, PGF-2, from **Grifola frondosa** were studied mainly by instrumental anal. The polysaccharide fraction (PGF-2) was prepared from crude polysaccharide (PGF), using DEAE-Sephadex A-25 chromatog. PGF-2 was a glycoprotein. The polysaccharide content was 95.4% and the protein content was 2.25%. The sugar part of PGF-2 was non-starch neutral sugar. PGF-2 showed to be homogeneous by paper chromatog. and Sephadex G-200 chromatog. Its numeral average mol. weight was 118803 Dal and weight average mol. weight was 119612 Dal by gel permeation chromatog. PGF-2 was composed of glucose, mannose and galactose with the molar ratio of 1:2.35:1.22 and 16 kinds of amino acids by GC and HPLC anal. IR and NMR illustrated that PGF-2 mainly contained  $\alpha$ -glucosidic bonds.  $\beta$ -Elimination reaction showed that the linkage between sugars and amino acid was the form of -O-Ser.

CC 63-4 (Pharmaceuticals)  
Section cross-reference(s): 11

ST **Grifola** polysaccharide **glycoprotein** compn structure

IT Oligosaccharides, biological studies  
RL: NPO (Natural product occurrence); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)  
(O-linked; phys. and chemical properties and chemical structure of polysaccharide fraction PGF-2 from **Grifola frondosa**)

IT NMR (nuclear magnetic resonance)  
(chemical shift; phys. and chemical properties and chemical structure of polysaccharide fraction PGF-2 from **Grifola frondosa**)

IT **Grifola frondosa**  
**Molecular weight**  
(phys. and chemical properties and chemical structure of polysaccharide fraction PGF-2 from **Grifola frondosa**)

IT Amino acids, biological studies  
**Glycoproteins**  
Natural products, pharmaceutical  
Polysaccharides, biological studies  
RL: NPO (Natural product occurrence); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)  
(phys. and chemical properties and chemical structure of polysaccharide fraction PGF-2 from **Grifola frondosa**)

IT 50-99-7P, Glucose, biological studies 52-90-4P, Cysteine, biological studies 56-84-8P, Aspartic acid, biological studies 59-23-4P, Galactose, biological studies 60-18-4P, Tyrosine, biological studies 63-91-2P, Phenylalanine, biological studies 74-79-3P, Arginine, biological studies 3458-28-4P, Mannose  
RL: NPO (Natural product occurrence); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)  
(phys. and chemical properties and chemical structure of polysaccharide

fraction PGF-2 from *Grifola frondosa*)

L173 ANSWER 9 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:498713 HCAPLUS

DOCUMENT NUMBER: 143:259127

TITLE: Potential role of medicinal mushrooms in breast cancer treatment: Current knowledge and future perspectives

AUTHOR(S): Petrova, Roumyana D.; Wasser, Solomon P.; Mahajna, Jamal A.; Denchev, Cvetomir M.; Nevo, Eviatar

CORPORATE SOURCE: Institute of Evolution, University of Haifa, Haifa, Israel

SOURCE: International Journal of Medicinal Mushrooms (2005), 7(1&2), 141-155

CODEN: IMMUFR; ISSN: 1521-9437

PUBLISHER: Begell House, Inc.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. Breast cancer has become the most common invasive form of female cancer in the last few decades. Statistics show that the rate of newly diagnosed cases of breast cancer is rising every year depending on age, race, heredity, and ethnicity. The National Cancer Institute of US and mainly the Division of Cancer Control and Population Sciences (DCCPS) promote and conduct research that also identifies the economic, social, cultural, psychol., behavioral, and biol. mechanisms that are potential reasons for breast cancer development. Advanced breast cancers do not respond well to therapy, and their gene expression arouses uncontrolled growth. Although estrogen-receptor (ER)-pos. breast cancers respond to hormonal therapy, the treatment of ER-neg. cancers is more complicated because of their ability for developing resistance to drugs. Lack of mol. targets in estrogen receptor-neg. breast cancer is a major therapeutic hurdle. It has been known that NF- $\kappa$ B is significantly important in the processes of inflammation, cell survival, transformation, and oncogenesis, as well as in the etiol. of breast cancer. A theory exists, according to which ER-neg. breast cancer cells depend on NF- $\kappa$ B for aberrant cell proliferation and simultaneously avoid apoptosis, suggesting that NF- $\kappa$ B can be used as a potential mol. target in breast cancer treatment. Studies on new anticancer treatments and other medicinal substances from mushrooms have been significantly expanded in the last few years. This is mainly because they contain bioactive polymers such as **polysaccharides** and **polysaccharide/protein** complexes, secondary metabolites, and enzymes isolated from fruit bodies, mycelia, and culture broth. There are data showing the potential activity of medicinal mushrooms in breast cancer treatment. *Ganoderma lucidum* has shown the most significant inhibitory effect on NF- $\kappa$ B activity in highly invasive breast cancer cells. Other medicinal mushrooms that have also been reported to produce biol. active substances, have been tested in in vivo or in vitro, and have demonstrated breast cancer inhibitory activity are *Agaricus bisporus*, *A. brasiliensis*, *Trametes versicolor*, *Grifola frondosa*, *Inonotus obliquus*, *Lentinus edodes*, *Leucoagaricus americanus*, *Pleurotus ostreatus*, *Sparassis crispa*, etc.

CC 1-0 (Pharmacology)

IT *Agaricus bisporus*

(*Agaricus bisporus* contain **bioactive** polymer such as

**polysaccharides**, **polysaccharide/protein**

complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)

IT *Agaricus brasiliensis*

(*Agaricus brasiliensis* contain **bioactive** polymer such as

**polysaccharides, polysaccharide/protein**  
complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)

- IT Ganoderma lucidum  
(Ganoderma lucidum contain **bioactive** polymer such as **polysaccharides, polysaccharide/protein** complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B in highly invasive breast cancer cells)
- IT Grifola frondosa  
(Grifola frondosa contain **bioactive** polymer such as **polysaccharides, polysaccharide/protein** complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)
- IT Inonotus obliquus  
(Inonotus obliquus contain **bioactive** polymer such as **polysaccharides, polysaccharide/protein** complex, secondary metabolites, and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)
- IT Lentinula edodes  
(Lentinus edodes contain **bioactive** polymer such as **polysaccharides, polysaccharide/protein** complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)
- IT Leucoagaricus americanus  
(Leucoagaricus americanus contain **bioactive** polymer such as **polysaccharides, polysaccharide/protein** complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)
- IT Transcription factors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(NF- $\kappa$ B (nuclear factor of  $\kappa$  light chain gene enhancer in B-cells); medicinal mushroom contain **bioactive** polymer such as **polysaccharides, polysaccharide/protein** complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)
- IT Pleurotus ostreatus  
(Pleurotus ostreatus contain **bioactive** polymer such as **polysaccharides, polysaccharide/protein** complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)
- IT Sparassis crispa  
(Sparassis crispa contain **bioactive** polymer such as **polysaccharides, polysaccharide/protein** complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)
- IT Trametes versicolor  
(Trametes versicolor contain **bioactive** polymer such as **polysaccharides, polysaccharide/protein** complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)
- IT Antitumor agents

Human

Mammary gland

Mammary gland, neoplasm

(medicinal mushroom contain **bioactive** polymer such as**polysaccharides, polysaccharide/protein**complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)

IT Enzymes, biological studies

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(medicinal mushroom contain **bioactive** polymer such as**polysaccharides, polysaccharide/protein**complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)

IT Mushroom

(medicinal; medicinal mushroom contain **bioactive** polymer suchas **polysaccharides, polysaccharide/protein**complex, secondary metabolites and enzymes showed inhibitory effect on nuclear factor  $\kappa$ B and showed potential role in breast cancer patient)

REFERENCE COUNT: 102 THERE ARE 102 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L173 ANSWER 10 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:559923 HCAPLUS

DOCUMENT NUMBER: 143:345512

TITLE: Manufacture of intracellular **polysaccharide** from **Grifola frondosa**

INVENTOR(S): Zhang, Kechang

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp. given

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1546677	A	20041117	CN 2003-10106540	20031203
PRIORITY APPLN. INFO.:			CN 2003-10106540	20031203

AB The title intracellular **polysaccharide** is manufactured by the following steps: (1) fermenting **Grifola frondosa** at 22-29°C for 120-168 h, (2) disrupting the mycelium in fermented liquid, (3) **extracting** with hot water, (4) removing **protein**, decolorizing and desalinizing by dialysis, and (5) **purifying** by column chromatog. The intracellular **polysaccharide** has the functions of HIV resistance, antineoplastic and adjusting immunity system, and can be made into injections or oral drugs.

IC ICM C12P019-04

CC 16-5 (Fermentation and Bioindustrial Chemistry)

ST intracellular **polysaccharide** manuf **Grifola frondosa** fermn

IT Antitumor agents

Bran

Cottonseed

Decolorization

Dialysis

**Extraction**

Fermentation

**Grifola frondosa**

Human immunodeficiency virus 1

Liquid chromatography

Separation

Zea mays

(manufacture of intracellular **polysaccharide** from **Grifola frondosa**)IT **Polysaccharides**, preparation

RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(manufacture of intracellular **polysaccharide** from **Grifola frondosa**)

IT 108-95-2, Phenol, uses 7664-93-9, Sulphuric acid, uses

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (manufacture of intracellular **polysaccharide** from **Grifola frondosa**)

IT 50-99-7, Glucose, biological studies 7778-77-0, Monopotassium phosphate 10043-52-4, Calcium chloride, biological studies 10043-83-1, Magnesium phosphate

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(manufacture of intracellular **polysaccharide** from **Grifola frondosa**)IT 64-17-5, **Ethanol**, uses 67-66-3, Chloroform, uses 71-36-3,

n-Butanol, uses 76-03-9, Trichloroacetic acid, uses 7647-14-5, Sodium chloride, uses 7722-84-1, Hydrogen peroxide, uses 9013-34-7, DEAE-cellulose

RL: NUU (Other use, unclassified); USES (Uses)

(manufacture of intracellular **polysaccharide** from **Grifola frondosa**)

L173 ANSWER 11 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:147834 HCAPLUS

DOCUMENT NUMBER: 140:233507

TITLE: Induction of lipolysis in vitro and loss of body fat in vivo by zinc- $\alpha$ 2-glycoprotein

AUTHOR(S): Russell, Steven T.; Zimmerman, Thomas P.; Domin, Barbara A.; Tisdale, Michael J.

CORPORATE SOURCE: Pharmaceutical Sciences Research Institute, Aston University, Birmingham, B4 7ET, UK

SOURCE: Biochimica et Biophysica Acta, Molecular and Cell Biology of Lipids (2004), 1636(1), 59-68  
CODEN: BBMLFG; ISSN: 1388-1981

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Loss of adipose tissue in cancer cachexia has been associated with tumor production of a lipid-mobilizing factor (LMF) which has been shown to be homologous with the plasma protein zinc- $\alpha$ 2-glycoprotein (ZAG). The aim of this study was to compare the ability of human ZAG with LMF to stimulate lipolysis in vitro and induce loss of body fat in vivo, and to determine the mechanisms involved. ZAG was **purified** from human plasma using a combination of Q Sepharose and Superdex 75 chromatog., and was shown to stimulate glycerol release from **isolated** murine epididymal adipocytes in a dose-dependent manner. The effect was enhanced by the cAMP phosphodiesterase inhibitor Ro20-1724, and attenuated by

freeze/thawing and the specific  $\beta 3$ -adrenoreceptor antagonist SR59230A. In vivo ZAG caused highly significant, time-dependent, decreases in body weight without a reduction in food and water intake. Body composition anal. showed that loss of body weight could be attributed entirely

to

the loss of body fat. Loss of adipose tissue may have been due to the lipolytic effect of ZAG coupled with an increase in energy expenditure, since there was a dose-dependent increase in expression of uncoupling protein-1 (UCP-1) in brown adipose tissue. These results suggest that ZAG may be effective in the treatment of obesity.

CC 14-1 (Mammalian Pathological Biochemistry)

Section cross-reference(s): 1

IT **Glycoproteins**

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);

PUR (Purification or recovery); **THU (Therapeutic use)**; BIOL

(Biological study); PREP (Preparation); USES (Uses)

(ZAG (zinc- $\alpha 2$ -glycoprotein); induction of lipolysis in vitro and loss of body fat in vivo by zinc- $\alpha 2$ -glycoprotein in relation to cancer cachexia and possible use in treatment of **obesity**)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 12 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:202822 HCAPLUS

DOCUMENT NUMBER: 138:220458

TITLE: Production of fungal extracellular immune stimulating compounds

INVENTOR(S): Kristiansen, Bjoern

PATENT ASSIGNEE(S): Medimush Aps, Norway; Waddell, David

SOURCE: PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003020944	A2	20030313	WO 2002-IB3557	20020903
WO 2003020944	A3	20040603		
WO 2003020944	C1	20050217		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1451336	A2	20040901	EP 2002-762662	20020903
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2005163800	A1	20050728	US 2003-488427	20020903
PRIORITY APPLN. INFO.:				
			NO 2001-4256	A 20010903
			WO 2002-IB3557	W 20020903

AB A process is described for the production of an immunostimulant by submerged cultivation of in which mycelium from agar plates or a fermentation broth is added to a liquid medium in a shake flask or a bioreactor containing nutrients

such as malt **extract**, yeast **extract**, peptone, and glucose having access to air or to which air is added, and which is kept in constant movement at .apprx.28°. At the proper conditions, there will be an increase in the production of extracellular lentinan, which is shown to be a better immunostimulant than intracellular lentinan. The extracellular product is precipitated from the growth medium by means of methods for the precipitation

of microbial polysaccharide.

IC ICM C12P019-00

CC 16-2 (Fermentation and Bioindustrial Chemistry)

Section cross-reference(s): 15

IT Fermentation

Fungi

**Grifola frondosa**

Immunostimulants

Lentinula edodes

Schizophyllum commune

Trametes versicolor

(production of fungal extracellular immune stimulating compds.)

IT **Glycoproteins**

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(production of fungal extracellular immune stimulating compds.)

L173 ANSWER 13 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:479369 HCAPLUS

DOCUMENT NUMBER: 141:87933

TITLE: Fermentation technology of **Grifola frondosa** and method for producing its **polysaccharide** peptide

INVENTOR(S): Qian, Xiuping; Lan, Degang; Wang, Qiang

PATENT ASSIGNEE(S): Weijing Zhonghua Shanghai Biological and Medical Science and Technology Co., Ltd., Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp. CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1398979	A	20030226	CN 2002-136517	20020816
PRIORITY APPLN. INFO.:			CN 2002-136517	20020816
AB The method comprises culturing <b>Grifola frondosa</b> strain GF103 on PDA or malt juice solid medium at 25-28° for 7-10 d, mutating under UV radiation for 5-15 s, screening on the above solid medium to obtain high-yield strain GF103-21; culturing on solid medium 70-78, sucrose or glucose 1, bran 20-28, gypsum or CaCO <sub>3</sub> 1, and water 60% at 22-26° for 20-30 d then at 18-24° for 20-25 d; culturing in seed medium at 24-28° for 2-3 d, fermenting for 4-7 d; press filtering to obtain mycelium, <b>extracting</b> with water at room temperature overnight and then at 90-100° for 2-5 h, concentrating, precipitating with 95% <b>ethanol</b> at 0-4° for 8-10 h, and drying.				
IC	ICM	C12P021-02		
	ICS	C12N001-14		
CC	16-7 (Fermentation and Bioindustrial Chemistry)			
	Section cross-reference(s): 1, 17			
ST	<b>polysaccharide</b> peptide <b>Grifola</b> mycelium biomass			
IT	<i>Oryza sativa</i>			

(bran; **polysaccharide** manufacture with **Grifola frondosa**)

IT Biomass  
Culture media  
Drugs  
Fermentation  
**Grifola frondosa**  
Health food  
Health products  
Mycelium  
Sawdust  
Soybean meal  
Wheat bran

(**polysaccharide** manufacture with **Grifola frondosa**)

IT **Glycoproteins**  
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(**polysaccharide** manufacture with **Grifola frondosa**)

IT Soybean oil  
RL: BUJ (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(**polysaccharide** manufacture with **Grifola frondosa**)

IT **Polysaccharides**, preparation  
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(**protein** complex; **polysaccharide** manufacture with **Grifola frondosa**)

IT Bran  
Straw

(rice; **polysaccharide** manufacture with **Grifola frondosa**)

IT Zea mays  
(slurry; **polysaccharide** manufacture with **Grifola frondosa**)

IT Oryza sativa  
(straw; **polysaccharide** manufacture with **Grifola frondosa**)

IT 50-99-7, D-Glucose, biological studies 57-50-1, Sucrose, biological studies 471-34-1, Calcium carbonate, biological studies 7487-88-9, Magnesium sulfate, biological studies 7778-77-0, Potassium dihydrogen phosphate 13397-24-5, Gypsum, biological studies  
RL: BUJ (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(**polysaccharide** manufacture with **Grifola frondosa**)

L173 ANSWER 14 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:479314 HCAPLUS

DOCUMENT NUMBER: 141:301386

TITLE: Method for **extracting** and separating **polysaccharide** peptide of fruiting body of **Grifola frondosa**

INVENTOR(S): Mao, Rengang; Lan, Degang; Wang, Qiang

PATENT ASSIGNEE(S): Weijing Zhonghua Shanghai Biological and Medical Science and Technology Co., Ltd., Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.  
CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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 CN 1398898 A 20030226 CN 2002-136693 20020828  
 PRIORITY APPLN. INFO.: CN 2002-136693 20020828  
 AB The method comprises grinding the fruiting body of **Grifola frondosa**, **extracting** with water at 50-120°C 2-5 times each for 1-20 h, concentrating, precipitating with 1-4 fold 95% **ethanol** at 4°C overnight, vacuum drying precipitate to obtain crude soluble **polysaccharide** peptide (**polysaccharide** content of 5-90% and polypeptide content of 5-80%); similarly **extracting** the soluble **polysaccharide** peptide-**extracted** residue with diluted acid, precipitating with organic solvent (such as alc., acetone, etc.) to obtain acid-soluble **polysaccharide** peptide; and similarly **extracting** with acid-soluble **polysaccharide** peptide-**extracted** residue with diluted base, and precipitating with organic solvent to obtain base-soluble **polysaccharide** peptide. The soluble **polysaccharide** peptide is further separated by dissolving in water, precipitating with 1 fold 95% **ethanol**, dissolving precipitate in water, precipitating at pH ≥8 (adjusted with 1-20% CAT-OH or CAT-Br + NaOH solution), concentrating supernatant, **deproteinizing**, precipitating with 2-4-fold 95% alc. to obtain **polysaccharide** peptide FB-1; dissolving the FB-1 in 1-50% acetic acid, concentrating the supernatant, **deproteinizing**, precipitating with 2-4-fold 95% **ethanol** to obtain FB-2; similarly separating at pH 5-8 to obtain FB-3; and similarly separating at pH 7 to obtain FB-4. The acid-soluble or base-soluble **polysaccharide** peptide may be further separated by above method.  
 IC ICM C07K014-37  
 ICS C08B037-00; A61P035-00; A61P009-12; A61P003-10; A61P003-06  
 CC 63-4 (Pharmaceuticals)  
 ST **polysaccharide** peptide **Grifola frondosa** fruiting body  
 extn  
 IT Peptides, biological studies  
 Polysaccharides, biological studies  
 RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (Grifola frondosa; method for **extracting** and separating **polysaccharide** peptide of fruiting body of **Grifola frondosa**)  
 IT **Extraction**  
 Grifola frondosa  
 (method for **extracting** and separating **polysaccharide** peptide of fruiting body of **Grifola frondosa**)  
 L173 ANSWER 15 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:212627 HCAPLUS  
 DOCUMENT NUMBER: 139:5686  
 TITLE: Biological activities of the polysaccharides produced from submerged culture of the edible Basidiomycete **Grifola frondosa**  
 AUTHOR(S): Lee, Bum Chun; Bae, Jun Tae; Pyo, Hyeong Bae; Choe, Tae Boo; Kim, Sang Woo; Hwang, Hye Jin; Yun, Jong Won  
 CORPORATE SOURCE: R&D Center, Hanbul Cosmetics Co., Chungbuk, 369-830, S. Korea  
 SOURCE: Enzyme and Microbial Technology (2003), 32(5), 574-581  
 CODEN: EMTED2; ISSN: 0141-0229  
 PUBLISHER: Elsevier Science Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Five groups of polysaccharides were prepared from mycelium **extract** and top and bottom fraction of filtrate ppts. by submerged culture of

**Grifola frondosa** at two different media (glucose and PMP medium) and their individual biol. activities were studied. These polysaccharides had diverse mol. mass (470-1650 kDa) and different biol. activities at the concns. of 0.01-0.2% (w/v). Most of polysaccharides had antioxidant and free radical scavenging activities after UV irradiation, where G-2 (bottom fraction of filtrate ppts. from glucose medium, MW 770 kDa) and G-3 polysaccharide (mycelium **extract** from glucose medium, MW 500 kDa) showed strong activity. The P-1 (from top fraction of filtrate ppts. from PMP medium, MW 1650 kDa) and P-3 polysaccharide (from mycelium **ext** . from PMP medium, MW 470 kDa) increased the proliferation of fibroblasts by approx. 23-25%. Other two groups of polysaccharides produced from glucose medium (G-2 and G-3 polysaccharides) showed also notable proliferation activity for fibroblasts. Treatment of fibroblasts with P-3 polysaccharide significantly increased the biosynthesis of collagen by approx. 80%. G-2 and G-3 polysaccharides showed also marked activity. However, G-1 and P-1 polysaccharides had only negligible activity in collagen biosynthesis.

CC 16-2 (Fermentation and Bioindustrial Chemistry)

ST **Grifola** polysaccharide fermn **bioactivity**

IT Fermentation

(batch; biol. activities of polysaccharides produced from submerged culture of edible Basidiomycete **Grifola frondosa**)

IT Antioxidants

Culture media

**Grifola frondosa**

(biol. activities of polysaccharides produced from submerged culture of edible Basidiomycete **Grifola frondosa**)

IT Polysaccharides, biological studies

RL: BMF (Bioindustrial manufacture); BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)

(biol. activities of polysaccharides produced from submerged culture of edible Basidiomycete **Grifola frondosa**)

IT Collagens, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (biosynthesis, stimulation of; biol. activities of polysaccharides produced from submerged culture of edible Basidiomycete **Grifola frondosa**)

IT Cell proliferation

(stimulation of; biol. activities of polysaccharides produced from submerged culture of edible Basidiomycete **Grifola frondosa**)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 16 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:121966 HCAPLUS

DOCUMENT NUMBER: 141:195013

TITLE: Quantification of (1,3)- $\beta$ -glucan in edible and medicinal mushroom polysaccharides by using limulus G test

AUTHOR(S): Yang, Xiaotong; Wan, Jennifer Manfan; Mi, Ke; Feng, Huiqin; Chan, Daniel K. O.; Yang, Qingyao

CORPORATE SOURCE: Faculty of Science, The University of Hong Kong, Hong Kong, Peop. Rep. China

SOURCE: Junwu Xitong (2003), 22(2), 296-302

CODEN: JUXIFB; ISSN: 1007-3515

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: English

AB (1,3)- $\beta$ -Glucan is a core structure in mushroom polysaccharides, which

claim to possess anticancerous and immunomodulatory properties. The ability to identify (1,3)- $\beta$ -glucan in mushroom polysaccharides not only provides useful information on the structural composition of the mushroom polysaccharides, but facilitates us to identify the potential anticancerous and immunomodulatory active compounds. Using limulus factor G test, (1,3)- $\beta$ -glucan was detected in 27 polysaccharides **extd** from 19 edible or medicinal mushrooms species. The result shows that (1,3)- $\beta$ -glucan exists in all mushroom polysaccharide **exts**. but its content variation extremely depends on the mushroom species or the part of mushroom and the degree of **purification**. Our data show the mean of (1,3)- $\beta$ -glucan in these mushroom polysaccharides is 34.8%. Nine mushroom polysaccharide **exts**. from *Lentinus edodes*, *Schizophyllum commune*, *Coriolus versicolor*, *Volvariella volvacea*, *Coprinus comatus*, *Grifola frondosa*, *Lyophyllum shimeji* have superior (1,3)- $\beta$ -glucan contents to the others. Our study demonstrates that limulus Factor G test is a quick and convenient method for detecting (1,3)- $\beta$ -glucan content in crude mushroom polysaccharide **exts**.

- CC 63-4 (Pharmaceuticals)  
Section cross-reference(s): 64
- IT Agaricus blazei  
Agrocybe chaxingu  
Auricularia auricula-judae  
Coprinus comatus  
Flammulina velutipes  
Ganoderma lucidum  
    **Grifola frondosa**  
Hericium erinaceus  
Lactarius deliciosus  
Lentinula edodes  
Lyophyllum shimeji  
Mushroom  
Pleurotus citrinopileatus  
Pleurotus cornucopiae  
Pleurotus eryngii  
Polyporus umbellatus  
Schizophyllum commune  
Trametes versicolor  
Tremella fuciformis  
Volvariella volvacea  
    (**exts.**; **isolation** and quantification of  
    (1,3)- $\beta$ -glucan in edible and medicinal mushroom polysaccharides by  
    limulus G test)
- IT Antitumor agents  
Immunomodulators  
    (**isolation** and quantification of (1,3)- $\beta$ -glucan in  
    edible and medicinal mushroom polysaccharides by limulus G test)
- IT Polysaccharides, biological studies  
RL: NPO (Natural product occurrence); PEP (Physical, engineering or  
chemical process); PYP (Physical process); THU (Therapeutic use); BIOL  
(Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)  
    (**isolation** and quantification of (1,3)- $\beta$ -glucan in  
    edible and medicinal mushroom polysaccharides by limulus G test)
- IT **Glycoproteins**  
RL: NPO (Natural product occurrence); THU (Therapeutic use); BIOL  
(Biological study); OCCU (Occurrence); USES (Uses)  
    (**isolation** and quantification of (1,3)- $\beta$ -glucan in  
    edible and medicinal mushroom polysaccharides by limulus G test)
- IT 9051-97-2, (1,3)- $\beta$ -Glucan  
RL: ANT (Analyte); NPO (Natural product occurrence); THU (Therapeutic

use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence);  
USES (Uses)

(isolation and quantification of (1,3)- $\beta$ -glucan in  
edible and medicinal mushroom polysaccharides by limulus G test)

IT 9050-67-3, Schizophyllan 37339-90-5, LEntinan

RL: NPO (Natural product occurrence); THU (Therapeutic use); BIOL  
(Biological study); OCCU (Occurrence); USES (Uses)

(isolation and quantification of (1,3)- $\beta$ -glucan in  
edible and medicinal mushroom polysaccharides by limulus G test)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 17 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:869098 HCAPLUS

DOCUMENT NUMBER: 137:351606

TITLE: Preparation of lactic acid fermented mushroom  
solutions exhibiting anticholesterolemic and  
antidiabetes effects

INVENTOR(S): Kim, Beom Kyu; Shin, Gab Gyun; Cha, Jae Young; Jeon,  
Beong Sam; Bae, Dong Won

PATENT ASSIGNEE(S): Biohub Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002090559	A1	20021114	WO 2001-KR2090	20011204
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2002085159	A	20021116	KR 2001-24513	20010507
KR 2003020772	A	20030310	KR 2001-54236	20010904
KR 2003042307	A	20030528	KR 2001-73033	20011122
CA 2445713	AA	20021114	CA 2001-2445713	20011204
EP 1385970	A1	20040204	EP 2001-274211	20011204
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1511193	A	20040707	CN 2001-823234	20011204
JP 2002335907	A2	20021126	JP 2001-371412	20011205
JP 3644500	B2	20050427		
US 2002192334	A1	20021219	US 2001-1970	20011205
US 6841180	B2	20050111		

PRIORITY APPLN. INFO.: KR 2001-24513 A 20010507  
KR 2001-54236 A 20010904  
KR 2001-73033 A 20011122  
WO 2001-KR2090 W 20011204

AB A process is provided for the preparation of mushroom mycelia, fruiting bodies, powders and **exts.** fermented by lactic acid bacteria to provide a fermented product which exhibits anticholesterolemic and antidiabetics properties. Thus, fruiting bodies and mycelia of *Agaricus blazei* were

ground to produce a dry powder which was mixed at a 5% (weight/weight) rate with 10% (weight/weight) defatted milk, 2% (weight/weight) sucrose and the balance water.

This mixture was heated to 100 °C for 20 min, cooled to 37 °C and inoculated with a culture of *Lactobacillus bulgaricus* at a 3% level. The mixture was fermented for 6 h at which time the fermented mixture was cooled to 4 °C and aged for 12 h. These aged fermented samples were then homogenized to produce a lactic acid fermented solution of *Agaricus blazei*. The biol. effects of the solns. prepared in this manner were tested by inclusion in the diets of rats to test for cholesterol lowering effects and of diabetes patients to test for blood glucose lowering effects.

IC ICM C12P007-56

CC 16-2 (Fermentation and Bioindustrial Chemistry)

Section cross-reference(s): 1, 63

ST lactic acid fermented mushroom **antidiabetic anticholesterol**

IT High-density **lipoproteins**

RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL (Biological study)

(cholesterol; preparation of lactic acid fermented mushroom solns. exhibiting anticholesterollemic and antidiabetes effects)

IT *Agaricus bisporus*

*Agaricus blazei*

*Cordyceps*

*Flammulina velutipes*

*Ganoderma applanatum*

*Ganoderma lucidum*

***Grifola frondosa***

*Lentinula edodes*

*Pleurotus ostreatus*

(**extract** of; preparation of lactic acid fermented mushroom solns. exhibiting anticholesterollemic and antidiabetes effects)

IT Viscosity

pH

(of fermented **exts.**; preparation of lactic acid fermented mushroom solns. exhibiting anticholesterollemic and antidiabetes effects)

IT Anticholesterollemic agents

**Antidiabetic agents**

Culture media

**Extraction**

Fermentation

Homogenization

Human

Lactic acid bacteria

*Lactobacillus delbrueckii bulgaricus*

Mushroom

Temperature effects, biological

(preparation of lactic acid fermented mushroom solns. exhibiting anticholesterollemic and antidiabetes effects)

IT **Oligosaccharides**, processes

RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)

(preparation of lactic acid fermented mushroom solns. exhibiting anticholesterollemic and antidiabetes effects)

REFERENCE COUNT:

6

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 18 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:409247 HCAPLUS

DOCUMENT NUMBER: 137:734

TITLE: Glycosylated leptin transport factor for controlling

weight and obesity  
 INVENTOR(S) : Qian, Hao; Gingerich, Ronald  
 PATENT ASSIGNEE(S) : USA  
 SOURCE: U.S. Pat. Appl. Publ., 18 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002065217	A1	20020530	US 2001-922450	20010804
US 2005049184	A1	20050303	US 2004-938049	20040910
PRIORITY APPLN. INFO.:			US 2000-222813P	P 20000804
			US 2001-922450	B1 20010804

AB Methods and compds. for the treatment of obesity and weight loss induction by use of a functional, glycosylated leptin transport factor (LTF) polypeptide, referred to as fn/glyLTF, are disclosed. An unstable defective version of the LTF protein, referred to herein as def/LTF, is present in freshly-drawn blood from obese animals or people; it is degraded rapidly in circulating blood. In people with normal body weight, fn/glyLTF stabilizes and protects leptin, a hormone with powerful effects on fat metabolism and body mass. LTF apparently is the same protein previously recognized as a soluble truncated fragment of the obesity receptor (Ob-R) protein, referred to in the prior art as Ob-Re, or sOb-R. In humans with normal body weight, fn/glyLYF has a weight of about 145 kD, compared

to a polypeptide-only weight of about 93 kD. defLTF has a substantially lower **mol. weight**, and tests using deglycosylating enzymes indicate that it is not glycosylated to the same level as fn/glyLTF. Treatment methods include: (1) elevating concns. of fn/glyLTF in circulating blood, by means such as i.v. injection or sustained-release implants, or by gene therapy; (2) suppressing enzymic deglycosylation in circulating blood, such as by extracorporeal removal of deglycosylating enzymes; and, (3) providing "surrogate" forms of fn/glyLTF. Diagnostic kits are also disclosed, for measuring both fn/glyLTF and def/LTF in animals and people suffering from obesity.

IC ICM A61K038-17

INCL 514008000

CC 1-10 (Pharmacology)

Section cross-reference(s): 2, 3, 15, 63

IT **Glycoproteins**

RL: DGN (Diagnostic use); PAC (Pharmacological activity); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)

(glycosylated leptin transport factor (fn/glyLTF); glycosylated leptin transport factor for controlling weight and **obesity**)

L173 ANSWER 19 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:969970 HCAPLUS

DOCUMENT NUMBER: 142:246034

TITLE: Production of **glycoprotein** derived from **Grifola frondosa**

INVENTOR(S) : Jung, Kyung Soo; Lee, Im Seon

PATENT ASSIGNEE(S) : S. Korea

SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given

CODEN: KRXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2002081825	A	20021030	KR 2001-21226	20010419
PRIORITY APPLN. INFO.:			KR 2001-21226	20010419

AB A process of preparing glycoprotein by **extracting Grifola frondosa** belonging to Basidiomycetes. Whereby, the glycoprotein has excellent anticancer activity and can be widely used for the treatment of cancer. **Grifola frondosa** is soaked in water and **extracted** at 90 to 100° for 1 to 2hr, and the **extract** is mixed with alc. in a **ratio** of 0.5:1 to 1.5:1(volume/volume), wherein the alc. is 90 to 100%(volume/volume) methanol, **ethanol**, propanol, butanol or pentanol. For example, 100g dried fruit body of **Grifola frondosa** is ground with 300mL distilled water, **extracted** at 95° for 1hr and concentrated under reduced pressure. The **extract** is added with 95%(volume/volume) **ethanol**, left at 4° over night and centrifuged to produce a precipitate, which is dissolved in 20mL distilled water,

centrifuged, dialyzed for 3 days and then freeze-dried.

IC ICM A61K035-78

CC 63-4 (Pharmaceuticals)

ST **glycoprotein Grifola extn**

IT **Grifola frondosa**

Solvent **extraction**  
(production of **glycoprotein** derived from **Grifola frondosa**)

IT **Glycoproteins**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(production of **glycoprotein** derived from **Grifola frondosa**)

IT 64-17-5, **Ethanol**, processes 67-56-1, Methanol, processes 71-23-8, Propanol, processes 71-36-3, Butanol, processes 71-41-0, Pentanol, processes

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)  
(production of **glycoprotein** derived from **Grifola frondosa**)

L173 ANSWER 20 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:149786 HCAPLUS

DOCUMENT NUMBER: 136:384663

TITLE: Anti-grifolan antibody reacts with the cell wall  $\beta$ -glucan and the extracellular mannoprotein- $\beta$ -glucan complex of *C. albicans*

AUTHOR(S): Uchiyama, Michiharu; Ohno, Naohito; Miura, Noriko N.; Adachi, Yoshiyuki; Yadomae, Toshiro

CORPORATE SOURCE: School of Pharmacy, Laboratory for Immunopharmacology of Microbial Products, Tokyo University of Pharmacy and Life Science, Hachioji, Tokyo, 192-0392, Japan

SOURCE: Carbohydrate Polymers (2002), 48(4), 333-340  
CODEN: CAPOD8; ISSN: 0144-8617

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We have recently prepared a rabbit antibody (Ab) against a fungal branched  $\beta$ -(1 3)-d-glucan, grifolan (GRN) obtained from **Grifola frondosa**. In this study, we examined the reactivity of anti-GRN Ab against a pathogenic fungus, *Candida albicans*. Anti-GRN Ab was strongly reacted with acetone dried, autoclaved, NaOH treated, as well as NaClO treated *C.*

albicans, assessed by FACS. The binding was inhibited by GRN, a solubilized *Candida* spp.  $\beta(1\ 3)$ -D-glucan (CSBG), and a extracellular mannoprotein- $\beta$ -glucan complex (CAWS). By ELISA anal., binding affinity of anti-GRN Ab to GRN and CSBG was different. These facts strongly suggested that anti-GRN Ab reacted with the cell wall  $\beta$ -glucan in several ways. The Ab would be useful for the immunochem. diagnostic test of the deep-seated mycosis.

CC 15-3 (Immunochemistry)

Section cross-reference(s): 10, 14

IT **Glycoproteins**

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(mannose-containing,  $\beta$ -glucan complexes; anti-grifolan antibody reacts with the cell wall  $\beta$ -glucan and the extracellular mannoprotein- $\beta$ -glucan complex of *C. albicans*)

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 21 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:609086 HCAPLUS

DOCUMENT NUMBER: 138:119653

TITLE: **Isolation, purification and characterization of polysaccharides from *Grifola frondosa***

AUTHOR(S): Li, Xiaoding; Wu, Moucheng; Zeng, Xiaobo; Rong, Jianhua; Wang, Zhongmin

CORPORATE SOURCE: Department of Food Science + Technology, Huazhong Agricultural University, Wuhan, 430070, Peop. Rep. China

SOURCE: Huazhong Nongye Daxue Xuebao (2002), 21(2), 186-188  
CODEN: HNDXEK; ISSN: 1000-2421

PUBLISHER: Huazhong Nongye Daxue

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The **polysaccharide** fraction (PGF) from ***Grifola frondosa*** was prepared with hot water **extraction, ethanol precipitation**, dialysis against water and lyophilization. Four kinds **polysaccharides**, PGF-1, PGF-2, PGF-3 and PGF-4, were **purified** from PGF by **deprotein** with Sevag method and DEAE-Sephadex A-25 chromatog. PGF-1 - PGF-4 showed to be homogeneous by paper chromatog., Sephadex G-200 chromatog. and polyacrylamide gel electrophoresis anal. PGF-1 was confirmed to be dextran by GC and TLC and its **mol. weight** was 110,000 by GPC. IR spectrum of PGF-1 revealed that it contained  $\beta$ -glucosidic bonds.

CC 10-1 (Microbial, Algal, and Fungal Biochemistry)

Section cross-reference(s): 33

ST ***Grifola* polysaccharides purifn isolation**

IT ***Grifola frondosa***

(**isolation, purification and characterization of polysaccharides from *Grifola frondosa***)

IT **Polysaccharides, properties**

RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)  
(**isolation, purification and characterization of polysaccharides from *Grifola frondosa***)

IT 9004-54-0P, Dextran, properties

RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)  
(**isolation, purification and characterization of polysaccharides from *Grifola frondosa***)

L173 ANSWER 22 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:932633 HCAPLUS  
 DOCUMENT NUMBER: 141:12057  
 TITLE: Preliminary study on **isolation and purification** of medicinal active component grifolan from **Grifola frondosa**  
 AUTHOR(S): Wang, Weiguo; Zhao, Yongliang; Bao, Dongwu  
 CORPORATE SOURCE: Biochemical Engineering Department, Nanyang Institute of Science and Technology, Nanyang, Henan Province, 473004, Peop. Rep. China  
 SOURCE: Zhengzhou Gongcheng Xueyuan Xuebao (2002), 23(4), 60-63  
 CODEN: ZZGHAR; ISSN: 1671-1629  
 PUBLISHER: Zhengzhou Gongcheng Xueyuan Xuebao Bianjibu  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese

AB The influential factors of **isolation and purification** of grifolan from **Grifola frondosus** fruits were studied by orthogonal test. The results showed that the optimal conditions of separation and **purification** of grifolan were adding 30 times of water to the raw plant, boiling twice at 980C in pH 6.5-7.0 solution for 3 h. The two liqs. were collected together and then concentrated, precipitated by 70% ethanol, so 12%-15% of raw **polysaccharide** could be obtained. In order to **purify** the **exts.** by removing **proteins**, raw **polysaccharide exts.** were treated with trichloromethane and 2-butanol for 60 min.

CC 63-4 (Pharmaceuticals)  
 ST grifolan **isolation purifn Grifola**  
 trichloromethane isobutanol **ethanol**  
 IT Antitumor agents  
**Grifola frondosa**  
 (**isolation and purification** of grifolan from **Grifola**)

IT 64-17-5, **Ethanol**, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**extraction medium; isolation and purification** of grifolan from **Grifola**)

IT 104074-36-4P, Grifolan  
 RL: PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (**isolation and purification** of grifolan from **Grifola**)

IT 67-66-3, Trichloromethane, uses 78-92-2, 2-Butanol  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**purification medium; isolation and purification** of grifolan from **Grifola**)

L173 ANSWER 23 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:217695 HCAPLUS  
 DOCUMENT NUMBER: 134:251706  
 TITLE: Zinc supplements, zinc-(glyco)protein complexes, and their manufacture  
 INVENTOR(S): Omura, Teijiro; Suganuma, Otokichi; Maeda, Hiroaki  
 PATENT ASSIGNEE(S): Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2001078715	A2	20010327	JP 1999-262556	19990916
PRIORITY APPLN. INFO.:				JP 1999-262556	19990916
AB	The complexes are manufactured by culture of <i>Lentinus</i> , <i>Grifola</i> , or <i>Agaricus</i> in media containing water-soluble Zn, and <b>isolating</b> (glyco)proteins containing $\geq 0.5$ g/100 g Zn from the cells or the culture media. <i>L. edodes</i> was cultured in the presence of $\text{Zn}(\text{NO}_3)_2$ to produce 1.1 g/L Zn-protein and 2.3 g/L Zn-glycoprotein, which in vitro promoted production of interleukin-I.				
IC	ICM A23L001-28 ICS A23J003-20; A23L001-304; C12P021-02; C12R001-645				
CC	18-1 (Animal Nutrition)				
ST	zinc supplement protein <b>glycoprotein</b> complex; <i>Lentinus</i> zinc protein <b>glycoprotein</b> complex supplement; <i>Grifola</i> zinc protein <b>glycoprotein</b> complex supplement; <i>Agaricus</i> zinc protein <b>glycoprotein</b> complex supplement				
IT	<i>Agaricus</i> <i>Agaricus blazei</i> <b>Grifola</b> <b>Grifola frondosa</b> <i>Lentinula edodes</i> <i>Lentinus</i> (manufacture of Zn-(glyco)protein complexes with)				
IT	<b>Glycoproteins</b> , specific or class Proteins, specific or class RL: BAC (Biological activity or effector, except adverse); BMF (Bioindustrial manufacture); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PREP (Preparation); USES (Uses) (zinc-containing; manufacture of Zn-(glyco)protein complexes as Zn supplements)				

L173 ANSWER 24 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2001:217694 HCAPLUS  
 DOCUMENT NUMBER: 134:251705  
 TITLE: Magnesium supplements, magnesium-(glyco)protein complexes, and their manufacture  
 INVENTOR(S): Omura, Teiji; Suganuma, Otokichi; Maeda, Hiroaki  
 PATENT ASSIGNEE(S): Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2001078714	A2	20010327	JP 1999-262552	19990916
PRIORITY APPLN. INFO.:				JP 1999-262552	19990916
AB	The complexes are manufactured by culture of <i>Lentinus</i> , <i>Grifola</i> , or <i>Agaricus</i> in media containing water-soluble Mg, and <b>isolating</b> (glyco)proteins containing $\geq 0.5$ g/100 g Mg from the cells or the culture media. <i>L. edodes</i> was cultured in the presence of MgO to produce 1.2 g/L Mg-protein and 2.5 g/L Mg-glycoprotein, which decreased plasma total cholesterol of rats.				
IC	ICM A23L001-28 ICS A23J003-20; A23L001-304; C12P021-02; C12R001-645				
CC	18-1 (Animal Nutrition)				

ST magnesium supplement protein **glycoprotein** complex; Lentinus magnesium protein **glycoprotein** complex supplement; **Grifola** magnesium protein **glycoprotein** complex supplement; Agaricus magnesium protein **glycoprotein** complex supplement

IT **Glycoproteins**, specific or class  
Proteins, specific or class  
RL: BAC (Biological activity or effector, except adverse); BMF (Bioindustrial manufacture); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(magnesium-containing; manufacture of Mg-(glyco)protein complexes as Mg supplements)

IT Agaricus  
Agaricus blazei  
**Grifola**  
**Grifola frondosa**  
Lentinula edodes  
Lentinus  
(manufacture of Mg-(glyco)protein complexes with)

L173 ANSWER 25 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:214806 HCAPLUS

DOCUMENT NUMBER: 134:251704

TITLE: Iron supplements, iron-(glyco)protein complexes, and their manufacture

INVENTOR(S): Omura, Teiji; Suganuma, Otokichi; Maeda, Hiroaki

PATENT ASSIGNEE(S): Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001078713	A2	20010327	JP 1999-262546	19990916
PRIORITY APPLN. INFO.:			JP 1999-262546	19990916

AB The complexes are manufactured by culture of Lentinus, **Grifola**, or Agaricus in media containing water-soluble Fe, and **isolating** (glyco)proteins containing  $\geq 0.5$  g/100 g Fe from the cells or the culture media. L. edodes was cultured to produce 15.2 g/L Fe-protein and 11.7 g/L Fe-glycoprotein, which increased erythrocyte number and hematocrit in patients with anemia.

IC ICM A23L001-28  
ICS A23J003-20; A23L001-304; C12P021-02; C12R001-645

CC 18-1 (Animal Nutrition)

ST iron supplement protein **glycoprotein** complex; Lentinus iron protein **glycoprotein** complex supplement; **Grifola** iron protein **glycoprotein** complex supplement; Agaricus iron protein **glycoprotein** complex supplement

IT **Glycoproteins**, specific or class  
Proteins, specific or class  
RL: BAC (Biological activity or effector, except adverse); BMF (Bioindustrial manufacture); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(iron-containing; manufacture of Fe-(glyco)protein complexes as Fe supplements)

IT Agaricus  
 Agaricus blazei  
 Grifola  
 Grifola frondosa  
 Lentinula edodes  
 Lentinus  
 (manufacture of Fe-(glyco)protein complexes with)

L173 ANSWER 26 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:174064 HCAPLUS

DOCUMENT NUMBER: 134:227342

TITLE: Method for **extracting bioactive**  
 components from mushrooms and/or yeasts

INVENTOR(S): Ikegawa, Tetsuro; Ikegawa, Akiko; Shimada, Fumitake

PATENT ASSIGNEE(S): Seimei Kagaku Kenkyusho Jugen, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001064195	A2	20010313	JP 1999-281868	19990827
PRIORITY APPLN. INFO.:			JP 1999-281868	19990827

AB The invention relates to a method for **extracting** biol. active component having antitumor activity, etc., from mushroom, e.g. shiitake, Flammulina, Pleurotus ostreatus, **Grifola frondosa**, Pholiota nameko, Polyporaceae, Ganoderma, Hypsizigus marmoreus, and Fomes yucateensis, and/or yeast, wherein the **extraction** is carried out with water or lower alc. after a glycolytic enzyme treatment of the mushroom and/or yeast. Hypsizigus marmoreus was treated  $\alpha$ -amylase and then **extracted** with water. The **extract** showed antitumor activity in sarcoma-180 cell-transplanted mice. Tablets were prepared from the Hypsizigus marmoreus **extract** and film coated with soybean peptide.

IC ICM A61K035-84

ICS A61K009-20; A61K031-00; A61K035-72

CC 63-4 (Pharmaceuticals)

Section cross-reference(s): 1

ST mushroom yeast **bioactive** component **extn** amylase

IT Shellac

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(film-coated tablets containing **exts.** of mushrooms and/or yeasts)

IT Antitumor agents

Flammulina

Fomes yucateensis

Ganoderma

**Grifola frondosa**

Hypsizygus marmoreus

Lentinula edodes

Mushroom

Pholiota nameko

Pleurotus ostreatus

Polyporaceae

Saccharomyces cerevisiae

Yeast

(method for **extracting bioactive** components from mushrooms and/or yeasts)

IT Natural products, pharmaceutical

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(method for **extracting bioactive** components from mushrooms and/or yeasts)

IT Enzymes, biological studies

RL: NUU (Other use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(polysaccharide-degrading; method for **extracting bioactive** components from mushrooms and/or yeasts)

IT Soybean (Glycine max)

(products, peptides; film-coated tablets containing **exts.** of mushrooms and/or yeasts)

IT Peptides, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(soybean; film-coated tablets containing **exts.** of mushrooms and/or yeasts)

IT Drug delivery systems

(tablets, coated; method for **extracting bioactive** components from mushrooms and/or yeasts)

IT 9000-90-2,  $\alpha$ -Amylase

RL: NUU (Other use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(method for **extracting bioactive** components from mushrooms and/or yeasts)

L173 ANSWER 27 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:539295 HCAPLUS

DOCUMENT NUMBER: 136:116526

TITLE: The relationship of oxidative DNA damage marker 8-hydroxydeoxyguanosine and glycoxidative damage marker pentosidine

AUTHOR(S): Kouda, Katsuyasu; Nakamura, Harunobu; Fan, Wen Ying; Horiuchi, Kentaro; Takeuchi, Hiroichi

CORPORATE SOURCE: Department of Public Health, Hamamatsu University School of Medicine, Hamamatsu, Japan

SOURCE: Clinical Biochemistry (2001), 34(3), 247-250

CODEN: CLBIAS; ISSN: 0009-9120

PUBLISHER: Elsevier Science Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 8-Hydroxydeoxyguanosine (8-OHdG) is a biomarker of oxidative DNA damage. Pentosidine is a biomarker of glycoxidn. reaction. In this study, we investigated relationship among 8-OHdG, pentosidine and age. We determined the urinary concentration of 8-OHdG and pentosidine in adults with mild hypercholesterolemia or/and mild hypertension (hypercholesterolemia group, n = 31; hypertension group, n = 25; hypercholesterolemia and hypertension group, n = 7). The strength of the relationship between 8-OHdG and age was the same as that between pentosidine and age (the correlation coefficient between 8-OHdG and age was 0.33, pentosidine and age was 0.37). In addition, there was a pos. and significant correlation between 8-OHdG and pentosidine. On the other hand, mean values of 8-OHdG and pentosidine showed no significant difference among the three groups. The results of the present study indicate that both 8-OHdG and pentosidine levels increase similarly in degenerative pathol. conditions.

CC 14-5 (Mammalian Pathological Biochemistry)

Section cross-reference(s): 9, 13

IT **Glycoproteins**

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(AGE (advanced glycosylation end product); relationship of urinary oxidative DNA damage marker 8-hydroxydeoxyguanosine and urinary glycoxidative damage marker pentosidine in adults with mild hypercholesterolemia or/and mild **hypertension**)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 28 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:105354 HCAPLUS

DOCUMENT NUMBER: 134:285520

TITLE: **Isolation** of antidiabetic components from white-skinned sweet potato (*Ipomoea batatas* L.)

AUTHOR(S): Kusano, Shuichi; Abe, Hiroyuki; Tamura, Hirohide

CORPORATE SOURCE: Research Institute, Fuji Sangyo Co., Ltd., Kagawa, 763-0071, Japan

SOURCE: Bioscience, Biotechnology, and Biochemistry (2001), 65(1), 109-114

CODEN: BBBIEJ; ISSN: 0916-8451

PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We have already reported that white-skinned sweet potato (*Ipomoea batatas* L.) (WSSP) shows antidiabetic activity in streptozotocin (STZ) induced diabetic rats and genetically diabetic models (yellow KK, db/db mice and Zucker fatty rats). In this study, **isolation** and **purifn** . of the antidiabetic component of WSSP were attempted. Almost all antidiabetic activity was found in the cortex of WSSP. The fractionation of the antidiabetic component in the WSSP cortex was done by the following methods: dialysis of the water **extract**, 85% ethanol precipitation, 15% trichloroacetic acid (TCA) treatment, butyl-, phenyl-hydrophobic column chromatog., and ultrafiltration treatment. The antidiabetic component was not eliminated during dialysis and was soluble in 85% ethanol and 15% TCA, but it passed through a filter that allows the passage of substances of a **mol. weight** of 30,000. The uniformity of this **isolated** active component was analyzed using HPLC. A single peak was seen with three different columns (C8 reverse-phase column, anion exchange QA column, and gel filtration column (GFC)), indicating that the component is a uniform substance. The **mol. weight** of this antidiabetic component was estimated to be 22,000 by GFC anal. This active component was presumed to be an acidic glycoprotein because it contained protein and sugar and was adsorbed onto the QA column at pH 7.0.

CC 63-4 (Pharmaceuticals)

Section cross-reference(s): 1

ST antidiabetic *Ipomoea* **isolation**

IT **Glycoproteins**, specific or class

RL: PUR (Purification or recovery); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses) (acid; **antidiabetic** from white-skinned sweet potato)

IT Antidiabetic agents

Sweet potato

(**isolation** of an antidiabetic from white-skinned sweet potato)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L173 ANSWER 29 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:493312 HCAPLUS

DOCUMENT NUMBER: 133:101738

TITLE: Tannins in method of **isolating** mucilaginous

**polysaccharides** and uses for the  
**polysaccharides** thus obtained  
 INVENTOR(S): Vittori, Natale  
 PATENT ASSIGNEE(S): Vito-Mannan Polysaccharide L.L.C., USA  
 SOURCE: PCT Int. Appl., 45 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041541	A2	20000720	WO 2000-US759	20000111
WO 2000041541	A3	20011115		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GR, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BF, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG CA 2328092 AA 20000720 CA 2000-2328092 20000111 EP 1144456 A2 20011017 EP 2000-904309 20000111 EP 1144456 A3 20020911 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO US 6482942 B1 20021119 US 2000-481111 20000111 PRIORITY APPLN. INFO.: US 1999-115619P P 19990112 WO 2000-US759 W 20000111				

AB The present invention provides a method of **isolating** mucilaginous **polysaccharides** from plants, cereals, cell cultures, or fungi such as mushrooms known to have mucilaginous or **protein-bound polysaccharides** with desirable biol. properties. The mucilaginous **polysaccharides** present in aqueous solution or tissue **exts.** are treated with tannins to form a complex which is then separated from the solution. The complex is then treated one or more times with either solvents or other substances in solution to remove the bounded tannins from the complex thereby and releasing the **isolated polysaccharide**. The **polysaccharides** prepared according to the present method retain properties that are substantially similar to those of the native **polysaccharide** as it is found in the resp. plant or cell. The **polysaccharides** thus prepared are used in a variety of products, e.g., in cosmetics, pharmaceuticals, and food products. This process is particularly suitable for **isolating** acetylated mannose polymers from aloe plants and beta glucans.

IC C12P019-00

CC 9-9 (Biochemical Methods)

Section cross-reference(s): 10, 11, 17, 62, 63

ST mucilaginous **polysaccharide isolation** tannin; aloe **polysaccharide isolation** tannin

IT Sarcoma

(Kaposi's, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT

Food

(and food supplements; tannins in method of **isolating**

- mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Oat  
Oat  
(bran; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Fatigue, biological  
(chronic fatigue syndrome, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Rheumatoid arthritis  
(chronic or acute, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Tannins  
RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); FORM (Formation, nonpreparative); PROC (Process)  
(complexes, with **polysaccharides**; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT **Polysaccharides**, processes  
RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); FORM (Formation, nonpreparative); PROC (Process)  
(complexes, with tannins; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Sorghum  
(condensed tannins of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Hair preparations  
(conditioners; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Cosmetics  
(creams, moisturizers; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Cryptosporidium  
(cryptosporidiosis from, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Skin, disease  
(decubitus ulcer, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Mental disorder  
(depression, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Medical goods  
(dressings; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Chestnut (Castanea)  
Divi-divi (Caesalpinia coriaria)  
Myrobalan  
(ellagitannin of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus

- obtained)
- IT Tannins  
RL: NUU (Other use, unclassified); USES (Uses)  
(ellagitannins; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Pruritus  
(formulation for treating; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Caesalpinia spinosa  
(gallotannin of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Drug delivery systems  
(implants; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Hepadnaviridae  
Herpesviridae  
Iridovirus  
Orthomyxovirus  
Paramyxovirus  
Pneumocystis carinii  
Poxviridae  
(infection with, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Intestine, disease  
(inflammatory, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Drug delivery systems  
(injections; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Skin, disease  
(insect bite, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Poison ivy  
Poison oak  
(irritation from, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Skin, disease  
(lesion, premalignant, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Cosmetics  
Drug delivery systems  
(lotions; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Intestine, disease  
(malabsorption, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Infection  
(measles, treatment of; tannins in method of **isolating**

mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT Mushroom  
(mycelia of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT Nerve, disease  
(neuralgia, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT Bran  
Bran  
(oat; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT Drug delivery systems  
(oral; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT Solvents  
(organic; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT Skin, disease  
(poisonous animal bite, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT Glycols, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(polymers; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT **Proteins**, specific or class  
RL: FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(**polysaccharide**-bound; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT Injury  
Wound  
(product for treating; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT Drug delivery systems  
(suppositories; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT Aloe (genus)  
Aloe barbadensis  
Animal tissue culture  
Anion exchangers  
Antimicrobial agents  
Beverages  
Candy  
Cation exchangers  
Cell  
Cereal (grain)  
Chromatography  
Detergents

Drug delivery systems

Ganoderma lucidum

Gel permeation chromatography

**Grifola frondosa**

Gums and Mucilages

Hide powder

Immunosuppressants

Leaf

Lentinula edodes

Oat

Plant (Embryophyta)

Plant tissue culture

Plantago major

Plantago ovata

Preservatives

Shampoos

Solvents

Sunscreens

Surfactants

Trametes versicolor

Wound healing

(tannins in method of **isolating** mucilaginous  
**polysaccharides** and uses for the **polysaccharides** thus  
obtained)

IT **Polysaccharides**, biological studies

RL: FFD (Food or feed use); PRP (Properties); PUR (Purification or  
recovery); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)

(tannins in method of **isolating** mucilaginous  
**polysaccharides** and uses for the **polysaccharides** thus  
obtained)

IT Albumins, uses

Caseins, uses

Gelatins, uses

Polyamides, uses

Polyoxyalkylenes, uses

Proanthocyanidins

**Proteins**, general, uses

Tannins

RL: NUU (Other use, unclassified); USES (Uses)

(tannins in method of **isolating** mucilaginous  
**polysaccharides** and uses for the **polysaccharides** thus  
obtained)

IT Anti-inflammatory agents

(topical, ointments; tannins in method of **isolating**  
mucilaginous **polysaccharides** and uses for the  
**polysaccharides** thus obtained)

IT Drug delivery systems

(topical; tannins in method of **isolating** mucilaginous  
**polysaccharides** and uses for the **polysaccharides** thus  
obtained)

IT AIDS (disease)

Allergy

Alopecia

Anxiety

Asthma

Cystic fibrosis

Hypercholesterolemia

Immunodeficiency

Inflammation

Influenza  
 Leukemia  
 Liver, neoplasm  
 Lupus erythematosus  
 Malnutrition  
 Multiple sclerosis  
 Mycosis  
 Neoplasm  
 Rheumatic fever  
 Sunburn  
 Tuberculosis

(treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

- IT Stomach, disease  
 (ulcer, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Intestine, disease  
 (ulcerative colitis, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT Infection  
 (viral, treatment of; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT 532-32-1, Sodium benzoate 24634-61-5, Potassium sorbate  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (as preservative; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT 108-95-2, Phenol, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (resin specific for; tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT 283603-85-0P, Vitto-Mannan  
 RL: FFD (Food or feed use); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT 64-17-5, **Ethanol**, uses 67-56-1, Methanol, uses 67-64-1, Acetone, uses 71-36-3, Butanol, uses 121-79-9, n-Propyl-gallate 149-91-7, Gallic acid, uses 646-06-0, 1,3-Dioxolane 1391-79-3, Granatin 7631-90-5, Sodium bisulfite 7732-18-5, Water, uses 7757-82-6, Sodium sulfate, uses 9003-01-4D, Polyacrylic acid, compds. 9003-39-8, Polyvinylpyrrolidone 9003-53-6, Polystyrene 9005-65-6, Tween 80 23094-69-1, Corilagin 25322-68-3 60976-49-0, Geraniin  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)
- IT 4049-33-6DP, compds. 9051-97-2DP, compds. 11078-30-1DP, Galactomannan, compds. 55965-23-6DP, compds.  
 RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)  
 (tannins in method of **isolating** mucilaginous **polysaccharides** and uses for the **polysaccharides** thus obtained)

IT 3458-28-4DP, Mannose, acetylated, polymers 9041-22-9DP,  $\beta$ -Glucan, compds.  
 RL: PUR (Purification or recovery); PREP (Preparation)  
 (tannins in method of isolating mucilaginous polysaccharides and uses for the polysaccharides thus obtained)

IT 73-78-9, Lidocaine hydrochloride  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (tannins in method of isolating mucilaginous polysaccharides and uses for the polysaccharides thus obtained)

L173 ANSWER 30 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:907606 HCAPLUS  
 DOCUMENT NUMBER: 134:307679  
 TITLE: Production of **extract** powder of **Grifola frondosa** and its chemical components analysis  
 AUTHOR(S): Xu, Jie; Chen, Tiqiang; Zhu, Peigen; Li, Kaiben; Lin, Zhangyu  
 CORPORATE SOURCE: Fujian Academy of Agricultural Science, Fuzhou, 350013, Peop. Rep. China  
 SOURCE: Jiangxi Nongye Daxue Xuebao (2000), 22(3), 428-430  
 CODEN: JNXUEV; ISSN: 1000-2286  
 PUBLISHER: Jiangxi Nongye Daxue Xuebao Bianjibu  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese

AB **Extraction** with hot water, concentration and spray-drying under vacuum condition was applied to produce the **extract** powder of **Grifola frondosa**. The analytic results showed that the content of crude **protein**, crude fat, total carbohydrate, crude **polysaccharide**, ash and crude fiber were 7.64%, 23.96%, 0.27%, 48.05%, 24.55%, 6.95% and less than 0.4% resp. This **extract** powder was abundant in mineral element: P 2.16 mg/g, Ca 430  $\mu$ g/g, Mg 970 Wg/g, Zn 56 Wg/g, Fe 83.1  $\mu$ g/g, Mn 7.3, g/g and Cu 9.7 Wg/g. Eighteen kinds of amino acids, totaled 12.66 mg/100 g were checked out and the **ratio** of essential amino acids was 41.0%. In addition, 266.83 mg/100 g Taurine was checked out. Clin. test results showed that heavy mental elements and microbial quantity of the **extract** powder were coincided with the hygienic standard

CC 10-1 (Microbial, Algal, and Fungal Biochemistry)  
 Section cross-reference(s): 17

ST **Grifola ext** powder nutrition

IT Amino acids, biological studies  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
 (essential; production of **extract** powder of **Grifola frondosa** and chemical components anal.)

IT **Grifola frondosa**  
 Health food  
 (production of **extract** powder of **Grifola frondosa** and chemical components anal.)

IT Amino acids, biological studies  
 Carbohydrates, biological studies  
 Fats and Glyceridic oils, biological studies  
 Fibers  
 Mineral elements, biological studies  
**Polysaccharides**, biological studies  
**Proteins**, general, biological studies  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

BIOL (Biological study); OCCU (Occurrence)  
(production of **extract** powder of **Grifola frondosa** and  
chemical components anal.)

IT 7732-18-5, Water, uses

RL: NUU (Other use, unclassified); USES (Uses)  
(hot; production of **extract** powder of **Grifola frondosa** and  
chemical components anal.)

IT 107-35-7, Taurine 7439-89-6, Iron, biological studies 7439-95-4,  
Magnesium, biological studies 7439-96-5, Manganese, biological studies  
7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological  
studies 7440-70-2, Calcium, biological studies 7723-14-0, Phosphorus,  
biological studies

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
BIOL (Biological study); OCCU (Occurrence)  
(production of **extract** powder of **Grifola frondosa** and  
chemical components anal.)

L173 ANSWER 31 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:784129 HCAPLUS

DOCUMENT NUMBER: 132:26801

TITLE: Glycoproteins having lipid-mobilizing properties for  
treatment of obesity

INVENTOR(S): Tisdale, Michael John; Todorov, Penio Todorov

PATENT ASSIGNEE(S): UK

SOURCE: PCT Int. Appl., 64 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9962939	A2	19991209	WO 1999-GB1509	19990601
WO 9962939	A3	20000316		
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2329138	AA	19991209	CA 1999-2329138	19990601
AU 9941527	A1	19991220	AU 1999-41527	19990601
EP 1082344	A2	20010314	EP 1999-925135	19990601
EP 1082344	B1	20030319		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
JP 2002519303	T2	20020702	JP 2000-552149	19990601
AT 234862	E	20030415	AT 1999-925135	19990601
ES 2194464	T3	20031116	ES 1999-925135	19990601
US 6890899	B1	20050510	US 2000-701463	19990601

PRIORITY APPLN. INFO.: GB 1998-11465 A 19980529

WO 1999-GB1509 W 19990601

AB A biol. active lipid-mobilizing agent for use in therapy is disclosed which has the properties and characteristics of a Zn- $\alpha$ 2-glycoprotein, or of a fragment thereof having an apparent mol. mass Mr greater than 6.0 kDa as determined by gel exclusion chromatog. Methods of

isolation and purification from biol. material are also disclosed together with uses of the material for making up pharmaceutical compns., especially pharmaceutical compns. useful for treating mammals to achieve weight reduction or for controlling obesity. In addition, uses of the material for developing diagnostic agents and for identifying inhibitors of lipolytic activity for therapeutic purposes are disclosed.

IC ICM C07K014-00

CC 63-3 (Pharmaceuticals)

Section cross-reference(s): 1

IT **Glycoproteins**, specific or class

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(Zn- $\alpha$ 2-; glycoproteins having lipid-mobilizing properties for treatment of obesity)

IT Antiobesity agents

Antitumor agents

Blood analysis

Cachexia

**Molecular weight**

Preparative chromatography

Protein sequences

**Purification**

Test kits

Urine analysis

(glycoproteins having lipid-mobilizing properties for treatment of obesity)

L173 ANSWER 32 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:807437 HCAPLUS

DOCUMENT NUMBER: 132:49338

TITLE: **Bioactive substances in Grifola**

frondosa. 1. Effects of administration of **Grifola frondosa** on blood pressure and body weight in spontaneously hypertensive rats

AUTHOR(S): Ohtsuru, Masaru; Horio, Hiroyuki; Masui, Hironori; Takeda, Imao

CORPORATE SOURCE: Dep. Food Sci. Nutr., Sch. Human Environ. Sci., Mukogawa Women's Univ., Nishinomiya-shi, 663-8558, Japan

SOURCE: Nippon Shokuhin Kagaku Kogaku Kaishi (1999), 46(12), 806-814

CODEN: NSKKEF; ISSN: 1341-027X

PUBLISHER: Nippon Shokuhin Kagaku Kogakkai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB We examined the effects of **Maitake** (**Grifola frondosa**) on body weight, blood pressure and biochem. components of blood in spontaneously hypertensive rats (SHR) for 37 days. Rats fed control diets containing powdered

**Maitake** 10% level (M 10) and 20% level (M 20) showed suppressed body weight and blood pressure. No difference in organ wts. was found among the three groups except for the liver, the weight of which in the **Maitake** groups was lower than that of the control. The **Maitake** groups showed lower total cholesterol and triglyceride in the blood and increased total cholesterol in the feces. The weight-reducing effect did not appear in rats administered heat-treated **Maitake**, a residue of **Maitake** extracted with water, and the ethanol-soluble fraction of **Maitake**. Only **Maitake**

**extract** with cold water provided an evident weight-reducing effect. From these results, we concluded that **Maitake** contains a water-soluble, heat-labile substance that can suppress body weight and blood pressure.

- CC 17-10 (Food and Feed Chemistry)  
 ST antihypertensive body wt blood lipid mushroom; **Grifola**  
 antihypertensive body wt blood  
 IT Glycerides, biological studies  
 Lipids, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (blood; effects of administration of **Grifola frondosa** on blood pressure, body weight, and biochem. compds. of blood in spontaneously hypertensive rats)  
 IT Feces  
 (cholesterol of; effects of administration of **Grifola frondosa** on blood pressure, body weight, and biochem. compds. of blood in spontaneously hypertensive rats)  
 IT Antihypertensives  
 Blood pressure  
 Body weight  
**Grifola frondosa**  
 (effects of administration of **Grifola frondosa** on blood pressure, body weight, and biochem. compds. of blood in spontaneously hypertensive rats)  
 IT 57-88-5, Cholesterol, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (blood; effects of administration of **Grifola frondosa** on blood pressure, body weight, and biochem. compds. of blood in spontaneously hypertensive rats)

L173 ANSWER 33 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:131437 HCAPLUS

DOCUMENT NUMBER: 126:233640

TITLE: Free radical scavenging activities of mushroom polysaccharide **extracts**

AUTHOR(S): Liu, F.; Ooi, V. E. C.; Chang, S. T.

CORPORATE SOURCE: Dep. Biol., Chinese Univ. Hong Kong, Shatin, Hong Kong

SOURCE: Life Sciences (1997), 60(10), 763-771

CODEN: LIFSAB; ISSN: 0024-3205

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The superoxide and hydroxyl radical scavenging activities of eight mushroom antitumor polysaccharide **exts.** were investigated using the phenazin methosulfate-NADH-nitroblue tetrazolium system and the ascorbic acid-Cu<sup>2+</sup>-cytochrome C system, resp. The results showed that six of eight mushroom polysaccharide **exts.** had superoxide and hydroxyl radical scavenging activities. The protein content of the polysaccharide **exts.** appeared to contribute a direct effect on free radical scavenging activity. However, none of the mushroom polysaccharide **exts.** had antioxidative activity as measured by detecting malondialdehyde (MDA) contents of liver microsomes.

CC 1-12 (Pharmacology)

IT **Glycoproteins**, specific or class

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(PS-K; free radical scavenging activities of mushroom polysaccharide

- exts.** in relation to antioxidant activity)
- IT Ganoderma lucidum  
**Grifola umbellata**  
 Mushroom  
 Schizophyllum commune  
 Tremella fuciformis  
 Tricholoma lobayensis  
 Volvariella volvacea  
 (free radical scavenging activities of mushroom polysaccharide  
**exts.** in relation to antioxidant activity)
- IT Polysaccharides, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (free radical scavenging activities of mushroom polysaccharide  
**exts.** in relation to antioxidant activity)
- IT Radicals, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (free radical scavenging activities of mushroom polysaccharide  
**exts.** in relation to antioxidant activity)
- IT Antioxidants  
 (pharmaceutical; free radical scavenging activities of mushroom polysaccharide **exts.** in relation to antioxidant activity)
- IT 37339-90-5, Lentinan  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (free radical scavenging activities of mushroom polysaccharide  
**exts.** in relation to antioxidant activity)
- IT 3352-57-6, Hydroxyl radical, biological studies 11062-77-4, Superoxide  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (free radical scavenging activities of mushroom polysaccharide  
**exts.** in relation to antioxidant activity)

L173 ANSWER 34 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:205477 HCAPLUS

DOCUMENT NUMBER: 124:285794

TITLE: Serum markers of collagen type I metabolism in spontaneously hypertensive rats: Relation to myocardial fibrosis

AUTHOR(S): Diez, Javier; Panizo, Angel; Gil, Maria J.; Monreal, Ignacio; Hernandez, Marta; Mindan, Javier Pardo

CORPORATE SOURCE: School Medicine, University Navarra, Pamplona, 31080, Spain

SOURCE: Circulation (1996), 93(5), 1026-32

CODEN: CIRCAZ; ISSN: 0009-7322

PUBLISHER: American Heart Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The assay of serum peptides of extracellular collagen synthesis and degradation could provide an indirect estimate of the rate of fibrillar turnover.

This study was designed to investigate whether serum peptides of collagen type I synthesis and degradation are altered in spontaneously hypertensive rats (SHR) with left ventricular hypertrophy and whether these serum collagen-derived peptides are related to myocardial fibrosis. The authors measured serum levels of carboxy-terminal propeptide of procollagen type I (PIP) as a marker of collagen I synthesis and serum levels of the

pyridinoline cross-linked telopeptide domain of collagen type I (CITP) as a marker of fibrillar collagen I degradation in ten 36-wk-old normotensive Wistar-Kyoto (WKY) rats, ten 36-wk-old SHR and, ten 16-wk-old SHR treated with the angiotensin-converting enzyme inhibitor quinapril (10 mg/kg body weight per day, orally) for 20 wk. PIP and CITP were determined by specific

RIAs.

Histomorphometric and immunohistochem. studies of the left ventricle were performed in all rats. In untreated SHR compared with WKY rats, the authors found a more extensive interstitial and perivascular fibrosis, an increased collagen volume fraction, a more marked deposition of collagen type I, an increased serum concentration of PIP, and a similar serum

concentration of

CITP. In quinapril-treated SHR compared with untreated SHR, the authors found an absence of left ventricular hypertrophy, a marked decrease of fibrosis, a lower collagen volume fraction, a diminished deposition of collagen type I, a decreased concentration of PIP, and a similar concentration of CITP.

A direct correlation was found between the collagen volume fraction and serum PIP ( $r=.753$ ) in untreated SHR. These results suggest that tissue metabolism of collagen type I is abnormal in SHR and can be normalized by treatment with quinapril. On the basis of the findings, the authors propose that serum PIP may be a marker of collagen type I-dependent myocardial fibrosis in rats with genetic hypertension.

CC 14-5 (Mammalian Pathological Biochemistry)

Section cross-reference(s): 1

IT **Glycoproteins**, specific or class

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

**THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence);

USES (Uses)

(PICP (procollagen type I C-terminal propeptide), collagen type I-derived serum peptides in spontaneously **hypertensive** rats with left ventricular hypertrophy as markers of myocardial fibrosis)

L173 ANSWER 35 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:453311 HCAPLUS

DOCUMENT NUMBER: 125:111811

TITLE: Expression of ICAM-1 on glomeruli is associated with progression of diabetic nephropathy in a genetically obese diabetic rat, Wistar fatty

AUTHOR(S): Matsui, Hideki; Suzuki, Masami; Tsukuda, Ryoichi; Iida, Kyoko; Miyasaka, Masayuki; Ikeda, Hitoshi

CORPORATE SOURCE: Drug Safety Research Laboratories, Takeda Chemical Industries Ltd., Ibaraki, 300-41, Japan

SOURCE: Diabetes Research and Clinical Practice (1996), 32(1-2), 1-9

CODEN: DRCPE9; ISSN: 0168-8227

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We developed an animal model for non-insulin-dependent diabetes mellitus, a genetically obese rat strain, Wistar fatty. These rats show obesity-related features such as hyperinsulinemia and hyperlipemia, and only males develop diabetic features including hyperglycemia, glucosuria and polyuria as they age. Histopathol. study demonstrated a deposition of PAS-pos. granules in the epithelial cells and a diffuse thickening of the mesangial area and moderate changes of the renal tubules. We found that ICAM-1 is expressed on the glomeruli of male Wistar fatty rats and the expression is associated with the development of nephropathy; it is weak at 5 wk, becomes markedly strong at 15 wk and progresses further at 29 wk of age. We tried in vivo administration of monoclonal antibody, anti-ICAM-1

alone or together with anti-LFA-1 into male Wistar fatty rats during the period from 5 wk to 17 wk of age. The treatment, however, could not prevent the development of nephropathy. ICAM-1 expressed on the glomeruli of Wistar fatty rats seems not to play a key role in development of the nephropathy by mediating leukocyte infiltration. It will be a useful marker of the development of the disease.

CC 14-8 (Mammalian Pathological Biochemistry)

IT **Glycoproteins**, specific or class

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

**THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence);

USES (Uses)

(ICAM-1 (intercellular adhesion mol. 1), ICAM-1 expression on glomeruli association with progression of diabetic nephropathy in genetically obese diabetic rat)

L173 ANSWER 36 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:646323 HCAPLUS

DOCUMENT NUMBER: 121:246323

TITLE: Blood pressure-stabilizing agents containing substances having superoxide dismutase-like activities and/or antioxidant activities

INVENTOR(S): Kato, Kunihiro; Nakano, Masatoshi

PATENT ASSIGNEE(S): Yunie KK, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06199694	A2	19940719	JP 1992-84865	19920306
PRIORITY APPLN. INFO.:			JP 1992-84865	19920306

AB The title agents contain substances having superoxide dismutase (SOD)-like activities and/or antioxidant activities (including scavenging activities), phenols, and sugars (glycoproteins, flavonoid glycosides, etc.). Oral administration of an aqueous solution containing 0.25% a composition containing 1-50 mg/g flavonoid glycoside, 2-20% proteins, 3-15% phenol, and substance having  $\geq 20,000$  U/g (the solution) SOD-like activity and/or antioxidant activity (at .apprx.1000 mL/day for 2-3 mo) was effective in therapy of patients with hypertension or hypotension. The solution showed active O-removing and -scavenging effect.

IC ICM A61K037-50  
ICS A61K031-015; A61K031-05; A61K031-195; A61K031-355; A61K031-375; A61K031-70

CC 1-8 (Pharmacology)

IT Carbohydrates and Sugars, biological studies  
**Glycoproteins**, biological studies  
Phenols, biological studies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)  
(comps. having superoxide dismutase-like and/or antioxidant activities and phenols and sugars for **blood pressure** stabilization)

L173 ANSWER 37 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:66845 HCAPLUS

DOCUMENT NUMBER: 118:66845  
 TITLE: Sulfated  $\beta$ -glucan for treatment of retrovirus infection  
 INVENTOR(S): Ishikawa, Koichi; Nanba, Hiroaki; Kawachi, Teruyoshi  
 PATENT ASSIGNEE(S): Korumedea Japan K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04308531	A2	19921030	JP 1991-150827	19910404
JP 06099320	B4	19941207		

PRIORITY APPLN. INFO.: JP 1991-150827 19910404

AB Sulfated glycoproteins isolated from **Maitake** (a plant grown in Japan) are effective in treatment of AIDS. A method of **extracting** the glycoproteins is disclosed, and inhibitory activity against HIV demonstrated.

IC ICM A61K031-72

ICS A61K035-84; C08B037-00

CC 63-4 (Pharmaceuticals)

Section cross-reference(s): 11

ST **Maitake glycoprotein** AIDS treatment

IT **Grifola frondosa**

(**glycoprotein extraction** from, for AIDS treatment)

IT Acquired immune deficiency syndrome

(treatment of, **Maitake glycoproteins** for)

IT Virus, animal

(human immunodeficiency 1, infection by, treatment of, **Maitake glycoproteins** for)

IT **Glycoproteins**, specific or class

RL: BIOL (Biological study)

(sulfo-, from **Maitake**, for AIDS treatment)

L173 ANSWER 38 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:437718 HCAPLUS

DOCUMENT NUMBER: 113:37718

TITLE: Chemical features of water-soluble polysaccharides in the fruit body of **Grifola frondosa**

AUTHOR(S): Kato, Koji; Okumura, Naomi; Yamauchi, Ryo; Ueno, Yoshimitsu

CORPORATE SOURCE: Fac. Agric., Gifu Univ., Gifu, 501-11, Japan

SOURCE: Gifu Daigaku Nogakubu Kenkyu Hokoku (1989), (54), 199-203

CODEN: GNKEAH; ISSN: 0072-4513

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Polysaccharides from **exts.** of *G. frondosa* fruiting body gave maltose by the degradation with  $\alpha$ -amylase from *Bacillus* sp. Polysaccharides were further fractionated on DEAE-cellulose column using M/20 and saturated Na<sub>2</sub>B<sub>4</sub>O<sub>7</sub>, and M/20 NaOH. Sugars in those fractions were transformed to alditol acetates and analyzed by gas-chromatog. The cold water **extract** contained polysaccharides composed of glucose (I), galactose (II), mannose (III), and rhamnose (IV) with 4.5-5.4 protein and 24.3-63.9 sugar contents; and of I, II, III, and fucose (V) with 26.7 protein and 25.4% sugar contents. Polysaccharides from the hot water **extract** were further fractionated on Sepharose CL-4B column with M/10

NaCl. A polysaccharide of  $[\alpha]D +167^\circ$ , hydrolyzable with glucoamylase from *Rhizopus delemere* and giving only I, and polysaccharides composed of I, II, III, IV, and V with 7.5 protein and 52.8 sugar contents; and of I, II, III, and V with 14.5 protein and 20.7% sugar contents, were obtained from the hot water **extract**

CC 11-1 (Plant Biochemistry)

Section cross-reference(s): 33

ST **Grifola** fruiting body polysaccharide

IT **Glycoproteins**, biological studies

Polysaccharides, biological studies

RL: BIOL (Biological study)

(of **Grifola frondosa** fruiting body)

IT **Grifola frondosa**

(polysaccharides of fruiting body of)

IT 50-99-7, Glucose, biological studies 69-79-4, Maltose 2438-80-4,

Fucose 3458-28-4, Mannose 3615-41-6, Rhamnose

RL: BIOL (Biological study)

(polysaccharides of fruiting body of **Grifola frondosa** containing)

L173 ANSWER 39 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:466431 HCAPLUS

DOCUMENT NUMBER: 109:66431

TITLE: Antitumor activity exhibited by orally administered **extract** from fruit body of **Grifola frondosa** (**Maitake**)

AUTHOR(S): Hishida, Ikuko; Nanba, Hiroaki; Kuroda, Hisatora

CORPORATE SOURCE: Lab. Microbiol., Kobe Women's Coll. Pharm., Kobe, 658, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1988), 36(5), 1819-27

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The acid-insol., alkali-soluble, hot-water-**extractable** polymer (a **polysaccharide** containing approx. 30% of **protein**; D-fraction) obtained from the fruit bodies of *G. Frondosa* (**Maitake**) exhibited antitumor activities against allogenic and syngeneic tumors after oral administration to mice. The Winn assay conducted to examine the tumor growth-suppressing effect revealed a complete inhibition of the tumor by the oral administration of the D-fraction, indicating that stimulation of the immune response system triggered by the tumor-bearing state is activated by the D-fraction. Consequently, the activity of the D-fraction on cells associated with the immune response was examined. The cytolytic activity and interleukin-1 productivity of macrophages or T cells which exhibit antigen-specific cytotoxicity were enhanced. The D-fraction was found to potentiate the delayed-type hypersensitivity response which is associated with tumor growth suppression.

CC 1-6 (Pharmacology)

ST **Grifola polysaccharide** fruit **ext** antitumor

IT Macrophage

(cytolytic activity of and interleukin formation by, enhancement of, by **Grifola frondosa polysaccharide**-containing fraction)

IT Immunostimulation

(in neoplasm inhibition by **Grifola frondosa polysaccharide**-containing fraction)

IT **Grifola frondosa**

(**polysaccharide**-containing fraction of fruit of, neoplasm inhibition by)

IT Neoplasm inhibitors

(**polysaccharide**-containing fraction of **Grifola frondosa**)

- as, mechanism of)
- IT **Polysaccharides**, biological studies  
 RL: BIOL (Biological study)  
 (Grifola frondosa **extract** containing, neoplasm inhibition by)
- IT Lymphocyte  
 (T-, cytolytic activity of and interleukin formation by, enhancement of, by Grifola frondosa **polysaccharide**-containing fraction)
- IT Allergy  
 (delayed hypersensitivity, potentiation of, by Grifola frondosa **polysaccharide**-containing fraction, tumor growth suppression in relation to)
- IT Lymphokines and Cytokines  
 RL: FORM (Formation, nonpreparative)  
 (interleukin 1, formation of, by macrophages and T lymphocytes, enhancement of, by Grifola frondosa **polysaccharide**-containing fraction)

L173 ANSWER 40 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1987:400409 HCAPLUS

DOCUMENT NUMBER: 107:409

TITLE: The chemical structure of an antitumor polysaccharide in fruit bodies of Grifola frondosa (Maitake)

AUTHOR(S): Nanba, Hiroaki; Hamaguchi, Atsuko; Kuroda, Hisatora

CORPORATE SOURCE: Lab. Microbiol., Kobe Women's Coll. Pharm., Kobe, 658, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1987), 35(3), 1162-8

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A polysaccharide was **extracted** from fruit bodies of G. frondosa (Maitake), and the chemical structure and antitumor activity were studied. The **extracted** polysaccharide could be hydrolyzed by  $\beta$ -glucanase into glucose, indicating it to be a  $\beta$ -glucan. The sample gave Me 2,3,4,6-tetra-O-, Me 2,4,6-tri-O-, Me 2,3,4-tri-O-, and Me 2,4-di-O-methylglucoside in the molar **ratio** of 4:21:4 on methylation. In carbon-13 NMR spectrum, the signals of C-6' [related to (1-6) bonding] and C-3' [related to (1-3) bonding] were observed in addition to those of free C-6 and C-3. These results indicate that the major chain is made up of  $\beta$ -1,6-linked glucose residues with branches of  $\beta$ -1,3-linked glucose. This glucan inhibited the growth of Sarcoma 180 tumor in ICR mice.

CC 1-6 (Pharmacology)

Section cross-reference(s): 11, 33

ST antitumor glucoside structure Grifola fruit; polysaccharide structure Grifola fruit

IT **Glycoproteins**, biological studies

RL: BIOL (Biological study)

(of Polyporus versicolor, antitumor activity of polysaccharides from Grifola frondosa fruits in relation to)

IT **Grifola frondosa**

(polysaccharides from fruits of, antitumor activity and structure determination of)

IT Neoplasm inhibitors

(polysaccharides from Grifola frondosa fruits)

L173 ANSWER 41 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1986:508076 HCAPLUS  
 DOCUMENT NUMBER: 105:108076  
 TITLE: Studies on the host-mediated antitumor polysaccharides. Part IX. Fractionation and characterization of antitumor polysaccharides from **Maitake, Grifola frondosa**  
 AUTHOR(S): Mizuno, Takashi; Ohsawa, Keiko; Hagiwara, Naomi; Kuboyama, Reiko  
 CORPORATE SOURCE: Fac. Agric., Shizuoka Univ., Shizuoka, 422, Japan  
 SOURCE: Agricultural and Biological Chemistry (1986), 50(7), 1679-88  
 CODEN: ABCHA6; ISSN: 0002-1369  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Three groups of polysaccharides from the edible mushroom "**Maitake**," the cultured fruiting body of *G. frondosa*, were **extracted** with hot H<sub>2</sub>O, 3% NH<sub>4</sub>-oxalate (100°C), and 5% NaOH solution (30°C). The 3 fractions, FI, FII and FIII, were divided into several subfractions using various chromatog. techniques. The fractions with host-mediated antitumor activity were water-soluble  $\beta$ -(1 $\rightarrow$ 3)-D-glucan [9051-97-2], water-soluble acidic  $\beta$ -D-glucan [9041-22-9], water-insol. acidic xyloglucan [37294-28-3], acidic heteroglycan, and acidic glycoprotein. None of the polysaccharides that were active i.p. against mouse-implanted Sarcoma 180 had any activity when administered orally.  
 CC 1-6 (Pharmacology)  
 Section cross-reference(s): 11  
 ST polysaccharide **isolation Grifola** antitumor  
 IT Polysaccharides, biological studies  
 RL: BIOL (Biological study)  
 (antitumor activity and characterization of, of **Grifola frondosa**)  
 IT Neoplasm inhibitors  
 (polysaccharides of **Grifola frondosa** as)  
 IT **Grifola frondosa**  
 (polysaccharides of, antitumor activity and characterization of)  
 IT **Glycoproteins**  
 RL: PROC (Process)  
 (acid, of **Grifola frondosa**, antitumor activity and characterization of)  
 IT 9041-22-9 9051-97-2 37294-28-3  
 RL: PROC (Process)  
 (of **Grifola frondosa**, antitumor activity and characterization of)

L173 ANSWER 42 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1986:122759 HCAPLUS  
 DOCUMENT NUMBER: 104:122759  
 TITLE: Effects of the antitumor agents from various natural sources on drug-metabolizing system, phagocytic activity and complement system in sarcoma 180-bearing mice  
 AUTHOR(S): Ito, Hitoshi  
 CORPORATE SOURCE: Sch. Med., Mie Univ., Tsu, 514, Japan  
 SOURCE: Japanese Journal of Pharmacology (1986), 40(3), 435-43  
 CODEN: JJPAAZ; ISSN: 0021-5198  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The correlation between the antitumor activity and effects on such biol. properties as phagocytic activity in the reticuloendothelial system, the

complement-C3 [80295-41-6] activation, hepatic drug-metabolizing activities and pentobarbital-induced narcosis, of antitumor agents from various natural sources such as BB (Broncasma Berna), GU-P (Grifora umbellata polysaccharide), OK-432 [39325-01-4], PS-K, and RA-P (Rumex acetosa polysaccharide) were studied in mice implanted with sarcoma 180 solid tumor. All of the agents depressed aniline hydroxylase [9012-80-0] and aminopyrine demethylase [9037-69-8] activities, prolonged the duration of pentobarbital-induced narcosis, and enhanced the phagocytic activity and C3 activity. Especially, RA-P which has the strongest antitumor activity was the most effective in affecting these activities. The biol. activities of GU-P at a dose of 10 mg/kg reached the same level as that found with PS-K at a dose of 100 mg/kg. All of these effects may relate to the antitumor mechanism of the tested agents.

CC 1-6 (Pharmacology)

IT **Glycoproteins**

RL: BIOL (Biological study)

(from Polypyrus versicolor, drug-metabolizing enzyme of liver and phagocytosis in reticuloendothelium and complement response to, neoplasm inhibition in relation to)

IT **Grifola umbellata**

Rumex acetosa

(polysaccharides, drug-metabolizing enzyme of liver and phagocytosis in reticuloendothelium and complement response to, neoplasm inhibition in relation to)

L173 ANSWER 43 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1985:201195 HCAPLUS

DOCUMENT NUMBER: 102:201195

TITLE: Neutral and acidic antitumor **polysaccharides** **extracted** from cultured fruit bodies of **Grifola frondosa**

AUTHOR(S): Ohno, Naohito; Iino, Kazuyoshi; Suzuki, Iwao; Oikawa, Shozo; Sato, Kichiro; Miyazaki, Toshio; Yadomae, Toshiro

CORPORATE SOURCE: Tokyo Coll. Pharm., Hachioji, 192-03, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1985), 33(3), 1181-6

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Water-soluble glucan fractions **extracted** from the cultured fruit bodies of *G. frondosa* with hot water, and with cold and hot NaOH containing urea showed potent antitumor activity in mice. Each fraction was separated into neutral and acidic glucan fractions on a DEAE-Sephadex A-25 (HCO<sub>3</sub><sup>-</sup>) column. Both neutral and acidic fractions showed potent antitumor activity against Sarcoma 180 solid tumor in ICR mice. From the results of methylation anal. and <sup>13</sup>C NMR spectroscopy, the neutral fractions contained mainly  $\alpha$ -1,4 and 6-branched  $\beta$ -1,3-linkages, and the acidic fractions contained mainly  $\beta$ -1,6- and 6-branched  $\beta$ -1,3-linkages. The branching **ratio** was similar in both glucans. By colorimetric anal, each acidic fraction contained .apprx.2-5% uronic acid. Thus, cultured fruit bodies of *G. frondosa* contain neutral and acidic antitumor glucans.

CC 11-1 (Plant Biochemistry)

Section cross-reference(s): 1

ST **Grifola** glucan neoplasm inhibitor

IT **Polysaccharides**, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(from **Grifola frondosa** fruiting bodies, antitumor activity of)

IT **Proteins**  
 Uronic acids  
 RL: BIOL (Biological study)  
 (of **polysaccharide** fraction of **Grifola frondosa** fruiting bodies)

IT Carbohydrates and Sugars, biological studies  
 RL: BIOL (Biological study)  
 (of **polysaccharides**, of **Grifola frondosa** fruiting bodies)

IT Neoplasm inhibitors  
 (polysaccharides as, from **Grifola frondosa** fruiting bodies)

IT **Grifola frondosa**  
 (polysaccharides of fruiting boeies of, antitumor activity of)

IT 14265-44-2, biological studies  
 RL: BIOL (Biological study)  
 (of **polysaccharide** fraction of **Grifola frondosa**)

L173 ANSWER 44 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1986:476030 HCAPLUS

DOCUMENT NUMBER: 105:76030

TITLE: Host-mediated antitumor polysaccharides. Part 9. Fractionation, chemical structure, chemical modification and antitumor activity of homo- and heteroglucans isolated from "**Maitake**", the fruiting body of **Grifola frondosa**

AUTHOR(S): Mizuno, Takashi; Ohsawa, Keiko; Hagiwara, Naomi; Kuboyama, Reiko

CORPORATE SOURCE: Fac. Agric., Shizuoka Univ., Shizuoka, 422, Japan

SOURCE: Shizuoka Daigaku Nogakubu Kenkyu Hokoku (1985), (35), 49-61

CODEN: SDNKAA; ISSN: 0559-8850

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Polysaccharides (PS) of cultivated **Maitake** (*G. frondosa*) and their antitumor activities were examined. The fruiting body of **Maitake** was successively extracted with hot water, 3% aqueous  $\text{NH}_4^+$  oxalate at  $100^\circ$ , and 5% aqueous NaOH at  $30^\circ$  to obtain water-soluble PS fraction 1 and water-insol. PS fractions 2 and 3, resp. Fractions 1, 2, and 3 were fractionated by DEAE-cellulose, Sephadex G-100, Sepharose CL-4B, and Con A-Sepharose 4B chromatog., EtOH precipitation, and dialysis to obtain water-soluble  $\beta$ -D-glucan (I) and water-soluble acidic  $\beta$ -D-glucan (II) from fraction 1, water-insol. acidic xyloglucan (III) from fraction 2 and acidic heteroglucan (IV) and 3 glycoproteins (V, VI and VII) from fraction 3. The antitumor activities were evaluated in ICR/JCL mice by the growth ratio of s.c.-implanted Sarcoma 180 to show fractions 2-3 and I-VII as active with ID50s 23.8, 16.7, 5.8, 12.9, 23.8, 16.1, 38.5, 13.9 and 9.3 mg/kg, resp. I had a mol. weight of 1,000,000 and was a  $\beta$ -(1 $\rightarrow$ 3)-D-glucan with  $\beta$ -(1 $\rightarrow$ 6) monoglucosyl branching, with min. average chain length of 5 and a degree of branching of 3; II had a mol. weight 500,000 and was composed of 82.4% glucose and 8.8% uronic acid. III had a mol. weight 50,000 and was a  $\beta$ -(1 $\rightarrow$ 3)-D-glucan with (1 $\rightarrow$ 6) and (1 $\rightarrow$ 2) branching. IV had a mol. weight 100,000-250,000 and contained 20.4% uronic acid and small amts. of fucose, xylose, and mannose. The acidic glycoproteins, V, VI, and VII had mol. wts. 1,000,000, 70,000-100,000, and

20,000-50,000, resp., and protein contents of 18.1, 10.6, and 26.9%, resp., and contained 13.5, 10.0, and 9.8% uronic acid, resp. The antitumor activity of the polyaldehydes, polyols, and controlled Smith degradation products prepared from fractions 1-3 were tested, but the antitumor activity was not increased significantly.

CC 11-1 (Plant Biochemistry)

Section cross-reference(s): 1

ST **Grifola** polysaccharide antitumor activity; glycan

**Grifola** antitumor activity; **glycoprotein Grifola** antitumor activity

IT **Glycoproteins**

Polysaccharides, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(from **Grifola frondosa** fruiting body, antitumor activity of)

IT Neoplasm inhibitors

(polysaccharide containing, from fruiting body of **Grifola frondosa**)

IT Uronic acids

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(polysaccharides containing, from **Grifola frondosa** fruiting body, antitumor activity of)

IT **Grifola frondosa**

(polysaccharides from fruiting bodies of, antitumor activity of)

IT 9041-22-9 37294-28-3

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(from **Grifola frondosa** fruiting body, antitumor activity of)

L173 ANSWER 45 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:191193 HCAPLUS

DOCUMENT NUMBER: 98:191193

TITLE: Screening of host-mediated antitumor polysaccharides by crossed immunoelectrophoresis using fresh human serum

AUTHOR(S): Shimura, Keishiro; Ito, Hitoshi; Hibasami, Hiroshige

CORPORATE SOURCE: Sch. Med., Mie Univ., Mie, 514, Japan

SOURCE: Japanese Journal of Pharmacology (1983), 33(2), 403-8  
CODEN: JJPAAZ; ISSN: 0021-5198

DOCUMENT TYPE: Journal

LANGUAGE: English

AB On crossed immunoelectrophoresis, human serum complement C3 [80295-41-6] converted by antitumor polysaccharides [ATSO (antitumor polysaccharide oral), *Agaricus blazei* polysaccharide, **Grifola umbellata** polysaccharide, polysaccharide Kureha, and zymosan] moved faster than native C3, appearing as the most anodal of 3 C3 peaks and was designated as the 3rd peak. The **ratio** of height of the 3rd peak to the  $\alpha$ 2-macroglobulin peak was linearly proportional to the dose of ATSO. At the dose of 500  $\mu$ g/mL antitumor polysaccharides, the **ratios** were higher than 0.76, and the **ratios** for the serum treated with polysaccharides possessing no antitumor activity (dextran [9004-54-0] and gum arabic [9000-01-5]) were less than about 0.52. This **ratio** can be used as a measure for the antitumor activity of polysaccharides.

CC 1-1 (Pharmacology)

IT **Glycoproteins**

RL: BIOL (Biological study)

(from *Polyporus versicolor*, neoplasm inhibition by, assessed by

complement C3 conversion, in human)

IT **Grifola umbellata**  
(polysaccharide GU-P of, antitumor activity of, assessed by complement  
C3 conversion, in human)

L173 ANSWER 46 OF 99 MEDLINE on STN DUPLICATE 3  
ACCESSION NUMBER: 2000161032 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 10696116  
TITLE: The use of mushroom glucans and proteoglycans in cancer  
treatment.  
AUTHOR: Kidd P M  
SOURCE: Alternative medicine review : a journal of clinical  
therapeutic, (2000 Feb) Vol. 5, No. 1, pp. 4-27. Ref: 91  
Journal code: 9705340. ISSN: 1089-5159.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
LANGUAGE: English  
FILE SEGMENT: Consumer Health  
ENTRY MONTH: 200003  
ENTRY DATE: Entered STN: 7 Apr 2000  
Last Updated on STN: 7 Apr 2000  
Entered Medline: 28 Mar 2000

ABSTRACT:

Immunoceuticals can be considered as substances having immunotherapeutic efficacy when taken orally. More than 50 mushroom species have yielded potential immunoceuticals that exhibit anticancer activity in vitro or in animal models and of these, six have been investigated in human cancers. All are non-toxic and very well tolerated. Lentinan and schizophyllan have little oral activity. Active Hexose Correlated Compound (AHCC) is poorly defined but has shown early clinical promise. Maitake D-Fraction has limited proof of clinical efficacy to date, but controlled research is underway. Two proteoglycans from Coriolus versicolor - PSK (Polysaccharide-K) and PSP (Polysaccharide-Peptide - have demonstrated the most promise. In Japanese trials since 1970, PSK significantly extended survival at five years or beyond in cancers of the stomach, colon-rectum, esophagus, nasopharynx, and lung (non-small cell types), and in a HLA B40-positive breast cancer subset. PSP was subjected to Phase II and Phase III trials in China. In double-blind trials, PSP significantly extended five-year survival in esophageal cancer. PSP significantly improved quality of life, provided substantial pain relief, and enhanced immune status in 70-97 percent of patients with cancers of the stomach, esophagus, lung, ovary, and cervix. PSK and PSP boosted immune cell production, ameliorated chemotherapy symptoms, and enhanced tumor infiltration by dendritic and cytotoxic T-cells. Their extremely high tolerability, proven benefits to survival and quality of life, and compatibility with chemotherapy and radiation therapy makes them well suited for cancer management regimens.

CONTROLLED TERM: \*Agaricales  
Humans  
\*Neoplasms: DT, drug therapy  
Neoplasms: MO, mortality  
Plant Extracts: TU, therapeutic use  
\*Polysaccharides: TU, therapeutic use  
\*Proteoglycans: TU, therapeutic use  
Survival Analysis

CHEMICAL NAME: 0 (Active Hexose Correlated Compound); 0 (Plant  
Extracts); 0 (Polysaccharides); 0 (Proteoglycans)

L173 ANSWER 47 OF 99 MEDLINE on STN DUPLICATE 4  
 ACCESSION NUMBER: 94348467 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 8069265  
 TITLE: Monoclonal antibody to proteoglycan derived from **Grifola frondosa (Maitake)**.  
 AUTHOR: Hirata A; Adachi Y; Itoh W; Komoda M; Tabata K; Sugawara I  
 CORPORATE SOURCE: Research Laboratory, Taito Co., Ltd., Kobe, Japan.  
 SOURCE: Biological & pharmaceutical bulletin, (1994 Apr) Vol. 17, No. 4, pp. 539-42.  
 Journal code: 9311984. ISSN: 0918-6158.  
 PUB. COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199409  
 ENTRY DATE: Entered STN: 6 Oct 1994  
 Last Updated on STN: 29 Jan 1999  
 Entered Medline: 26 Sep 1994

## ABSTRACT:

A murine monoclonal antibody (MAb) was prepared by immunizing BALB/c mice with a proteoglycan fraction derived from **Grifola frondosa** (**\*\*\*Maitake\*\*\*** mushroom), followed by the hybridization of spleen cells with mouse myeloma cells. The MAb (subclass; Ig G2b), designated MPG2, reacted with schizophyllan (SPG), curdlan, scleroglucan, laminarin and lentinan, but not with dextran, pullulan, mannan and xylan. Immunohistochemistry (ABC-GO method) showed that MAb MPG2 reacted with lysosomal proteoglycan and (1-->6)-beta-branched laminaritriose taken up by rabbit peritoneal macrophages. These results suggest that this MAb may recognize mainly (1-->3)-beta-D-glucan, and may be useful for determining the immunological properties of **\*\*\*Grifola\*\*\*** frondosa-derived proteoglycan.

CONTROLLED TERM: Check Tags: Female  
 Animals  
 \*Antibodies, Monoclonal: IM, immunology  
 Antigen-Antibody Reactions  
 \*Basidiomycota  
 Cross Reactions  
 Enzyme-Linked Immunosorbent Assay  
 \*Glucans: IM, immunology  
 Immunization  
 Immunohistochemistry  
 Mice  
 Mice, Inbred BALB C  
 Mice, Nude  
 Polysaccharides: IM, immunology  
 \*Proteoglycans: IM, immunology  
 Rabbits  
 CHEMICAL NAME: 0 (Antibodies, Monoclonal); 0 (Glucans); 0 (Polysaccharides); 0 (Proteoglycans)

L173 ANSWER 48 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2005506892 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 16178781  
 TITLE: Novel treatments for obesity and osteoporosis: targeting apoptotic pathways in adipocytes.  
 AUTHOR: Nelson-Dooley C; Della-Fera M A; Hamrick M; Baile C A  
 CORPORATE SOURCE: Departments of Animal and Dairy Sciences, University of Georgia, Athens, GA, USA.  
 SOURCE: Current medicinal chemistry, (2005) Vol. 12, No. 19, pp. 2215-25. Ref: 208  
 Journal code: 9440157. ISSN: 0929-8673.

PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 General Review; (REVIEW)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200511  
 ENTRY DATE: Entered STN: 24 Sep 2005  
 Last Updated on STN: 8 Nov 2005  
 Entered Medline: 7 Nov 2005

## ABSTRACT:

Obesity and osteoporosis have grave consequences for human health, quality of life, and even the efficiency of the labor force and economy. However, these pathologies share a common cell progenitor, revealing a surprising target for drug research and development. Recent findings show that high adipocyte count in bone marrow is directly related to bone loss, as fat cells replace osteoblasts (or bone-forming cells). The objective of this review is to examine the importance of adipocyte apoptosis in the treatment of obesity and/or osteoporosis, with special emphasis on natural products as promising leads for drug development. We have induced in vivo adipocyte apoptosis, using leptin, ciliary neurotrophic factor (CNTF), beta adrenergic agonists and conjugated linoleic acid (CLA) in rodents. The results of leptin treatments on rats are suppressed food intake, reduced body weight, reduced body fat, adipocyte apoptosis, and elevated energy expenditure. Further, leptin treatment of leptin-deficient (ob/ob) mice increases endosteal bone formation and bone mineral density. Adipocyte apoptosis has also been induced in vitro using tumor necrosis factor-alpha (TNF-alpha), (-)-epigallocatechin gallate (EGCG) from *Camellia sinensis* and ajoene, from *Allium sativum*. Natural products have potential for inducing apoptosis of adipose tissue, inhibiting bone marrow adipogenesis and increasing the expression of osteogenic factors in bone, thereby yielding effective treatments for obesity and osteoporosis.

CONTROLLED TERM: \*Adipocytes: DE, drug effects  
 Adipocytes: ME, metabolism  
 Adrenergic beta-Agonists: PD, pharmacology  
 Animals  
 Anti-Obesity Agents: PD, pharmacology  
 \*Anti-Obesity Agents: TU, therapeutic use  
 \*Apoptosis: DE, drug effects  
 Bone Marrow: ME, metabolism  
 Catechin: AA, analogs & derivatives  
 Catechin: PD, pharmacology  
 Cell Differentiation  
 Ciliary Neurotrophic Factor: PD, pharmacology  
 Disulfides: PD, pharmacology  
 Flavonoids: CH, chemistry  
 Flavonoids: PD, pharmacology  
 Humans  
 Leptin: ME, metabolism  
 Linoleic Acid: PD, pharmacology  
 Mesenchymal Stem Cells: CY, cytology  
 \*Obesity: DT, drug therapy  
 Obesity: ME, metabolism  
 \*Osteoporosis: DT, drug therapy  
 Osteoporosis: ME, metabolism  
 Plant Extracts: PD, pharmacology  
 Research Support, Non-U.S. Gov't  
 Tumor Necrosis Factor-alpha: PD, pharmacology  
 CAS REGISTRY NO.: 154-23-4 (Catechin); 2197-37-7 (Linoleic Acid); 92285-01-3 (ajoene); 989-51-5 (epigallocatechin gallate)  
 CHEMICAL NAME: 0 (Adrenergic beta-Agonists); 0 (Anti-Obesity Agents); 0 (Ciliary Neurotrophic Factor); 0 (Disulfides); 0

(Flavonoids); 0 (Leptin); 0 (Plant **Extracts**); 0  
(Tumor Necrosis Factor-alpha)

L173 ANSWER 49 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2004571883 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15494384  
 TITLE: Adjunctive granulocyte colony-stimulating factor therapy  
 for diabetic foot infections.  
 AUTHOR: Reed Kelly S; Pai Manjunath P  
 CORPORATE SOURCE: Providence St. Vincent Medical Center, Portland, OR, USA.  
 SOURCE: The Annals of pharmacotherapy, (2004 Dec) Vol. 38, No. 12,  
 pp. 2150-3. Electronic Publication: 2004-10-19. Ref: 20  
 Journal code: 9203131. ISSN: 1060-0280.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 General Review; (REVIEW)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200501  
 ENTRY DATE: Entered STN: 17 Nov 2004  
 Last Updated on STN: 2 Feb 2005  
 Entered Medline: 31 Jan 2005

## ABSTRACT:

OBJECTIVE: To evaluate the role of granulocyte colony-stimulating factor (G-CSF) as adjunctive therapy for the treatment of diabetic foot infections in non-neutropenic patients. DATA SOURCES: Clinical literature was accessed through MEDLINE (1965-April 2004). Key search terms included G-CSF, infection, and diabetes. In addition, relevant references from primary and secondary article bibliographies were **extracted**. DATA SYNTHESIS: Three clinical trials evaluating G-CSF for diabetic foot infections were identified. These data demonstrated positive effects of G-CSF on improvement of foot infections and risk of amputations. CONCLUSIONS: Controlled trials are necessary to validate the role of adjunctive G-CSF at reducing amputations in patients with diabetic foot infections.

CONTROLLED TERM: Anti-Infective Agents: TU, therapeutic use  
 \*Diabetic Foot: DT, drug therapy  
 Drug Therapy, Combination  
 \*Granulocyte Colony-Stimulating Factor: TU,  
 therapeutic use  
 \*Hematinics: TU, therapeutic use  
 Humans  
 Randomized Controlled Trials  
 Treatment Outcome

CAS REGISTRY NO.: 143011-72-7 (Granulocyte Colony-Stimulating Factor)  
 CHEMICAL NAME: 0 (Anti-Infective Agents); 0 (Hematinics)

L173 ANSWER 50 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2004241817 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15139786  
 TITLE: Management of hyperlipidaemia associated with heart  
 transplantation.  
 AUTHOR: Wenke Klaus  
 CORPORATE SOURCE: Division of Cardiac Surgery, Hospital Munich-Bogenhausen,  
 Munich, Germany.. klaus.wenke@extern.lrz-muenchen.de  
 SOURCE: Drugs, (2004) Vol. 64, No. 10, pp. 1053-68. Ref: 111  
 Journal code: 7600076. ISSN: 0012-6667.  
 PUB. COUNTRY: New Zealand  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 General Review; (REVIEW)  
 LANGUAGE: English

FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200410  
 ENTRY DATE: Entered STN: 14 May 2004  
 Last Updated on STN: 5 Oct 2004  
 Entered Medline: 4 Oct 2004

## ABSTRACT:

The past 20 years have seen considerable advances in the field of organ transplantation that have together led to a notable increase in survival rates and a reduction in postoperative morbidity of transplant recipients. However, these advances have been accompanied by the appearance of other complications of transplantation, such as post-transplant hyperlipidaemia, hypertension and graft coronary vasculopathy (GCV). GCV is an accelerated form of atherosclerosis in transplanted hearts that has proven to be one of the most important late complications of heart transplantation and is the single most limiting factor for long-term survival. The most important factors favouring the development of hyperlipidaemia after heart transplantation are inappropriate diet in combination with reduced physical activity, adverse effects of immunosuppressive therapy (ciclosporin [cyclosporin], corticosteroids) and polygenic hypercholesterolaemia in combination with ischaemic cardiomyopathy. The treatment of hyperlipidaemia in heart transplant recipients results in a variety of complications and side effects. In particular, interactions between lipid-lowering drugs and immunosuppressive therapy have been observed. Early attempts at treatment with bile acid binding agents and nicotinic acid derivatives often proved insufficiently effective, and led to unacceptable adverse effects and significant disturbances of ciclosporin metabolism. Fibric acid derivatives provided moderate reductions in triglyceride and total cholesterol levels that were mostly--with the exception of gemfibrozil--accompanied by significant impairment of renal function. Probucol achieved only an unsatisfactory reduction in low-density lipoprotein (LDL) cholesterol. Omega-3 fatty acids lower cholesterol levels and improve endothelial function in heart transplant recipients; however, the significance of these effects is still under discussion. As in the general patient population, use of HMG-CoA reductase inhibitors (statins) achieved significant reductions in cholesterol levels. Use of these substances has resulted in significantly extended long-term survival times, significantly less GCV and fewer severe graft rejections. Selective cholesterol absorption inhibitors, administered with or without statins, could provide another treatment option for heart transplant patients with hypercholesterolaemia. In severe familial hypercholesterolaemia, which is rarely observed in heart transplant recipients, treatment with statins can be combined with extracorporeal cholesterol elimination procedures such as heparin induced extracorporeal LDL cholesterol precipitation (HELP). HELP enables total cholesterol levels to be kept within any desired target range, and has been used successfully and without adverse effects in heart transplant recipients.

CONTROLLED TERM: Anticholesteremic Agents: PD, pharmacology  
 Anticholesteremic Agents: TU, therapeutic use  
 Carrier Proteins: PD, pharmacology  
 Carrier Proteins: TU, therapeutic use  
 Fatty Acids, Omega-3: PD, pharmacology  
 Fatty Acids, Omega-3: TU, therapeutic use  
 \*Heart Transplantation: AE, adverse effects  
 Heparin: PD, pharmacology  
 Heparin: TU, therapeutic use  
 Humans  
 \*Hyperlipidemia: DH, diet therapy  
 \*Hyperlipidemia: DT, drug therapy  
 Hyperlipidemia: ET, etiology  
 Immunosuppressive Agents: PD, pharmacology  
 Immunosuppressive Agents: TU, therapeutic use  
 Lipoproteins, LDL Cholesterol: ME, metabolism

**Membrane Glycoproteins: PD, pharmacology**  
 Membrane Glycoproteins: TU, therapeutic use  
 Probucol: PD, pharmacology  
 Probucol: TU, therapeutic use  
 Randomized Controlled Trials  
 CAS REGISTRY NO.: 23288-49-5 (Probucol); 9005-49-6 (Heparin)  
 CHEMICAL NAME: 0 (Anticholesteremic Agents); 0 (Carrier Proteins); 0  
 (Fatty Acids, Omega-3); 0 (Immunosuppressive Agents); 0  
 (Lipoproteins, LDL Cholesterol); 0 (Membrane  
 Glycoproteins); 0 (bile acid binding proteins)  
 L173 ANSWER 51 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2004393097 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15296707  
 TITLE: Inhibition of cholesteryl ester transfer protein activity:  
 a new therapeutic approach to raising high-density  
 lipoprotein.  
 AUTHOR: Rader Daniel J  
 CORPORATE SOURCE: Center for Experimental Therapeutics and Department of  
 Medicine, University of Pennsylvania School of Medicine,  
 654 BRB II/III, 421 Curie Boulevard, Philadelphia, PA  
 19104, USA.. rader@mail.med.upenn.edu  
 SOURCE: Current atherosclerosis reports, (2004 Sep) Vol. 6, No. 5,  
 pp. 398-405. Ref: 54  
 Journal code: 100897685. ISSN: 1523-3804.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 General Review; (REVIEW)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200502  
 ENTRY DATE: Entered STN: 7 Aug 2004  
 Last Updated on STN: 23 Feb 2005  
 Entered Medline: 22 Feb 2005

## ABSTRACT:

High-density lipoprotein (HDL) cholesterol levels are inversely associated with risk of atherosclerotic cardiovascular disease (ASCVD), leading to the concept that pharmacologic therapy to raise HDL cholesterol levels may reduce ASCVD risk. There is substantial interest in the concept of inhibition of the cholesteryl ester transfer protein (CETP) as a novel strategy for raising HDL cholesterol levels, as well as reducing levels of atherogenic lipoproteins. This article reviews the physiology of CETP in lipoprotein metabolism and the data in animals and humans that are relevant to the question of whether CETP inhibition may some day be part of the clinical armamentarium for treating dyslipidemia and atherosclerotic vascular disease.

CONTROLLED TERM: Animals  
 Arteriosclerosis: DT, drug therapy  
 Arteriosclerosis: ET, etiology  
 Cardiovascular Diseases: DT, drug therapy  
 Cardiovascular Diseases: ET, etiology  
 Carrier Proteins: GE, genetics  
 \*Carrier Proteins: PD, pharmacology  
 Carrier Proteins: TU, therapeutic use  
 Glycoproteins: DF, deficiency  
 Glycoproteins: GE, genetics  
 \*Glycoproteins: PD, pharmacology  
 Glycoproteins: TU, therapeutic use  
 Humans  
 Hyperlipidemia: CO, complications  
 Hyperlipidemia: DT, drug therapy

\*Lipoproteins, HDL Cholesterol: DE, drug effects  
 Lipoproteins, HDL Cholesterol: ME, metabolism  
 Mice  
 Polymorphism, Genetic

CHEMICAL NAME: 0 (Carrier Proteins); 0 (Glycoproteins); 0 (Lipoproteins, HDL Cholesterol); 0 (cholesterol ester transfer proteins)

L173 ANSWER 52 OF 99 MEDLINE on STN

ACCESSION NUMBER: 2004098275 MEDLINE

DOCUMENT NUMBER: PubMed ID: 14987072

TITLE: Biologically active compounds from Aphyllphorales (polypore) fungi.

AUTHOR: Zjawiony Jordan K

CORPORATE SOURCE: Department of Pharmacognosy and National Center for Natural Product Research, Research Institute of Pharmaceutical Sciences, School of Pharmacy, The University of Mississippi, University, Mississippi 38677-1848, USA.. jordan@olemiss.edu

SOURCE: Journal of natural products, (2004 Feb) Vol. 67, No. 2, pp. 300-10. Ref: 111  
 Journal code: 7906882. ISSN: 0163-3864.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 General Review; (REVIEW)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200404

ENTRY DATE: Entered STN: 2 Mar 2004  
 Last Updated on STN: 1 May 2004  
 Entered Medline: 30 Apr 2004

## ABSTRACT:

This review describes biologically active natural products isolated from Aphyllphorales, many of which are known as polypores. Polypores are a large group of terrestrial fungi of the phylum Basidiomycota (basidiomycetes), and they along with certain Ascomycota are a major source of pharmacologically active substances. There are about 25 000 species of basidiomycetes, of which about 500 are members of the Aphyllphorales, a polyphyletic group that contains the polypores. Many of these fungi have circumboreal distributions in North America, Europe, and Asia and broad distributions on all inhabited continents and Africa; only a small number of the most common species with the most obvious fruiting bodies (basidiocarps) have been evaluated for biological activity. An estimated 75% of polypore fungi that have been tested show strong antimicrobial activity, and these may constitute a good source for developing new antibiotics. Numerous compounds from these fungi also display antiviral, cytotoxic, and/or antineoplastic activities. Additional important components of this vast arsenal of compounds are polysaccharides derived from the fungal cell walls. These compounds have attracted significant attention in recent years because of their immunomodulatory activities, resulting in antitumor effects. These high **molecular weight** compounds, often called biological response modifiers (BRM), or immunopotentiators, prevent carcinogenesis, show direct anticancer effects, and prevent tumor metastasis. Some of the protein-bound polysaccharides from polypores and other basidiomycetes have found their way to the market in Japan as anticancer drugs. Finally, numerous compounds with cardiovascular, phytotoxic, immunomodulatory, analgesic, **antidiabetic**, antioxidant, insecticidal, and nematocidal activities, isolated from polypores, are also presented. In fact many of the fungi mentioned in this paper have long been used in herbal medicine, including polypores such as *Ganoderma lucidum* (Reishi or Ling Zhi), *Laetiporus sulphureus* (Chicken-of-the-Woods), *Trametes versicolor* (Yun Zhi), **Grifola** *umbellata* (Zhu Lin), *Inonotus obliquus* (Chaga), and *Wolfiporia cocos* (Hoelen).

CONTROLLED TERM: Adjuvants, Immunologic: CH, chemistry  
 Adjuvants, Immunologic: PD, pharmacology  
 Africa  
 Antibiotics, Antifungal: CH, chemistry  
 Antibiotics, Antifungal: PD, pharmacology  
 Antineoplastic Agents: CH, chemistry  
 Antineoplastic Agents: PD, pharmacology  
 Asia  
 \*Biological Factors  
 Europe  
 Japan  
 Molecular Structure  
 North America  
 \*Polyporales: CH, chemistry  
 CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Antibiotics, Antifungal); 0  
 (Antineoplastic Agents); 0 (Biological Factors)

L173 ANSWER 53 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2004344879 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15247477  
 TITLE: Derivatives of erythropoietin that are tissue protective  
 but not erythropoietic.  
 AUTHOR: Leist Marcel; Ghezzi Pietro; Grasso Giovanni; Bianchi  
 Roberto; Villa Pia; Fratelli Maddalena; Savino Costanza;  
 Bianchi Marina; Nielsen Jacob; Gerwien Jens; Kallunki  
 Pekka; Larsen Anna Kirstine; Helboe Lone; Christensen  
 Soren; Pedersen Lars O; Nielsen Mette; Torup Lars; Sager  
 Thomas; Sfacteria Alessandra; Erbayraktar Serhat;  
 Erbayraktar Zubeyde; Gokmen Necati; Yilmaz Osman;  
 Cerami-Hand Carla; Xie Qiao-Wen; Coleman Thomas; Cerami  
 Anthony; Brines Michael  
 CORPORATE SOURCE: H. Lundbeck A/S, 2500 Valby, Denmark.  
 SOURCE: Science, (2004 Jul 9) Vol. 305, No. 5681, pp. 239-42.  
 Journal code: 0404511. E-ISSN: 1095-9203.  
 COMMENT: Comment in: Science. 2004 Jul 9;305(5681):184-5. PubMed ID:  
 15247460  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200408  
 ENTRY DATE: Entered STN: 13 Jul 2004  
 Last Updated on STN: 3 Aug 2004  
 Entered Medline: 2 Aug 2004

ABSTRACT:  
 Erythropoietin (EPO) is both hematopoietic and tissue protective, putatively  
 through interaction with different receptors. We generated receptor  
 subtype-selective ligands allowing the separation of EPO's  
 \*\*\*bioactivities\*\*\* at the cellular level and in animals. Carbamylated EPO  
 (CEPO) or certain EPO mutants did not bind to the classical EPO receptor (EPOR)  
 and did not show any hematopoietic activity in human cell signaling assays or  
 upon chronic dosing in different animal species. Nevertheless, CEPO and  
 various nonhematopoietic mutants were cytoprotective in vitro and conferred  
 neuroprotection against stroke, spinal cord compression, diabetic neuropathy,  
 and experimental autoimmune encephalomyelitis at a potency and efficacy  
 comparable to EPO.

CONTROLLED TERM: Check Tags: Female  
 Animals  
 Apoptosis  
 Binding Sites

Cells, Cultured  
 Cerebrovascular Accident: DT, drug therapy  
**Diabetic Neuropathies: DT, drug therapy**  
 Drug Design  
 Encephalomyelitis, Autoimmune, Experimental: DT, drug therapy  
 Erythropoiesis  
 Erythropoietin: AA, analogs & derivatives  
 Erythropoietin: CH, chemistry  
 Erythropoietin: ME, metabolism  
**Erythropoietin: PD, pharmacology**  
**\*Erythropoietin: TU, therapeutic use**  
 \*Erythropoietin, Recombinant: AA, analogs & derivatives  
 Erythropoietin, Recombinant: GE, genetics  
 Erythropoietin, Recombinant: ME, metabolism  
**Erythropoietin, Recombinant: TU, therapeutic use**  
 Hematocrit  
 Humans  
 Ligands  
 Mice  
 Mice, Inbred C3H  
 Mutagenesis  
 \*Nervous System Diseases: DT, drug therapy  
 Neurons: ME, metabolism  
 Neuroprotective Agents: CH, chemistry  
 Neuroprotective Agents: ME, metabolism  
 Neuroprotective Agents: PD, pharmacology  
 \*Neuroprotective Agents: TU, therapeutic use  
 Rats  
 Rats, Sprague-Dawley  
 Receptors, Erythropoietin: ME, metabolism  
 Research Support, Non-U.S. Gov't  
 Signal Transduction  
 Spinal Cord Compression: DT, drug therapy  
 Structure-Activity Relationship  
 CAS REGISTRY NO.: 11096-26-7 (Erythropoietin)  
 CHEMICAL NAME: 0 (Erythropoietin, Recombinant); 0 (Ligands); 0 (Neuroprotective Agents); 0 (Receptors, Erythropoietin); 0 (carbamylated erythropoietin)

L173 ANSWER 54 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2003525614 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 14531775  
 TITLE: Treating azotemia-induced anemia with erythropoietin improves diabetic eye disease.  
 AUTHOR: Friedman Eli A; L'Esperance Francis A; Brown Clinton D; Berman David H  
 CORPORATE SOURCE: Department of Medicine, Downstate Medical Center, Brooklyn, New York 11203, USA.. elifriedmn@aol.com  
 SOURCE: Kidney international. Supplement, (2003 Nov) No. 87, pp. S57-63.  
 Journal code: 7508622. ISSN: 0098-6577.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: (CASE REPORTS)  
 Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200406  
 ENTRY DATE: Entered STN: 8 Nov 2003  
 Last Updated on STN: 26 Jun 2004

Entered Medline: 25 Jun 2004

## ABSTRACT:

BACKGROUND: Coincidental with the pandemic growth of diabetes as the prime cause of end-stage renal disease (ESRD), blindness attributable to diabetic retinopathy has become a major concern for all those involved in the care of diabetic ESRD patients. Vision loss is linked to progression of proliferative retinopathy and macular edema. METHODS: **Extracted** from a study of azotemic anemic pre-ESRD patients treated with erythropoietin, a cohort of five diabetic subjects was reassessed in terms of stability of renal function, changes in blood rheology, and course of diabetic eye disease. RESULTS: All subjects reported subjective improvement in well-being, including enhanced effort tolerance following an increase in hematocrit from a baseline level of to 29.6 +/- 2.0% to a level of 39.5 +/- 2.4% after one year of treatment with erythropoietin (P = <0.0005). Neither hypertension nor deterioration of renal function was noted in any subject. Three patients with macular edema evinced substantive improvement-based stable vision and documented resolution noted in flourescein angiography. CONCLUSION: Erythropoietin treatment of anemic azotemic diabetic patients is well tolerated. In a small observational retrospective study of three patients with macular edema, retention of vision and resolution of exudates was noted.

CONTROLLED TERM: Check Tags: Female  
 \*Anemia: DT, drug therapy  
 \*Anemia: ET, etiology  
 Diabetes Mellitus, Type 1: CO, complications  
 Diabetes Mellitus, Type 2: CO, complications  
 Diabetic Nephropathies: CO, complications  
 \*Diabetic Retinopathy: DT, drug therapy  
 \*Erythropoietin: TU, therapeutic use  
 Humans  
 Middle Aged  
 Papilledema: DT, drug therapy  
 \*Uremia: CO, complications  
 CAS REGISTRY NO.: 11096-26-7 (Erythropoietin)

L173 ANSWER 55 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2002260986 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 12000704  
 TITLE: Sugar creates a sticky business: round up the usual suspects.  
 AUTHOR: Rosenbaum James T  
 CORPORATE SOURCE: Casey Eye Institute, Oregon Health & Science University, Portland, Oregon 97201, USA.. rosenbaj@ohsu.edu  
 CONTRACT NUMBER: EY06484 (NEI)  
 SOURCE: The American journal of pathology, (2002 May) Vol. 160, No. 5, pp. 1547-50.  
 Journal code: 0370502. ISSN: 0002-9440.  
 COMMENT: Comment on: Am J Pathol. 2002 May;160(5):1683-93. PubMed ID: 12000720  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Commentary  
 Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals  
 ENTRY MONTH: 200206  
 ENTRY DATE: Entered STN: 10 May 2002  
 Last Updated on STN: 5 Jun 2002  
 Entered Medline: 4 Jun 2002  
 CONTROLLED TERM: Angiopoietin-1  
 Animals  
 Blood-Retinal Barrier: DE, drug effects

**\*Diabetic Retinopathy: DT, drug therapy**  
 Diabetic Retinopathy: ET, etiology  
 Endothelial Growth Factors: GE, genetics  
 Endothelial Growth Factors: ME, metabolism  
 Hyperglycemia: CI, chemically induced  
 \*Hyperglycemia: CO, complications  
 Intercellular Adhesion Molecule-1: GE, genetics  
 Intercellular Adhesion Molecule-1: ME, metabolism  
 Lymphokines: GE, genetics  
 Lymphokines: ME, metabolism  
**Membrane Glycoproteins: PD, pharmacology**  
 \*Membrane Glycoproteins: TU, therapeutic use  
 Mitogen-Activated Protein Kinases: DE, drug effects  
 Mitogen-Activated Protein Kinases: ME, metabolism  
 \*Protein-Serine-Threonine Kinases  
 Proto-Oncogene Proteins: DE, drug effects  
 Proto-Oncogene Proteins: ME, metabolism  
 Proto-Oncogene Proteins c-akt  
 RNA, Messenger: DE, drug effects  
 RNA, Messenger: GE, genetics  
 RNA, Messenger: ME, metabolism  
 Research Support, Non-U.S. Gov't  
 Research Support, U.S. Gov't, P.H.S.  
 Retina: DE, drug effects  
 Retina: ME, metabolism  
 Retina: PA, pathology  
 Vascular Endothelial Growth Factor A  
 Vascular Endothelial Growth Factors

CAS REGISTRY NO.: 126547-89-5 (Intercellular Adhesion Molecule-1)  
 CHEMICAL NAME: 0 (Angiopoietin-1); 0 (Endothelial Growth Factors); 0  
 (Lymphokines); 0 (Membrane Glycoproteins); 0  
 (Proto-Oncogene Proteins); 0 (RNA, Messenger); 0 (Vascular  
 Endothelial Growth Factor A); 0 (Vascular Endothelial  
 Growth Factors); EC 2.7.1.37 (Mitogen-Activated Protein  
 Kinases); EC 2.7.1.37 (Protein-Serine-Threonine Kinases);  
 EC 2.7.1.37 (Proto-Oncogene Proteins c-akt)

L173 ANSWER 56 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2002278024 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 12000720  
 TITLE: Suppression of diabetic retinopathy with angiopoietin-1.  
 AUTHOR: Joussen Antonia M; Poulaki Vassiliki; Tsujikawa Akitaka;  
 Qin Wenying; Qaum Tamim; Xu Qingwen; Moromizato Yasufumi;  
 Bursell Sven-Erik; Wiegand Stanley J; Rudge John; Ioffe  
 Ella; Yancopoulos George D; Adamis Anthony P  
 CORPORATE SOURCE: Laboratory for Surgical Research, Children's Hospital,  
 Harvard Medical School, Boston, Massachusetts, USA.  
 CONTRACT NUMBER: EY11627 (NEI)  
 EY12611 (NEI)  
 SOURCE: The American journal of pathology, (2002 May) Vol. 160, No.  
 5, pp. 1683-93.  
 Journal code: 0370502. ISSN: 0002-9440.  
 COMMENT: Comment in: Am J Pathol. 2002 May;160(5):1547-50. PubMed  
 ID: 12000704  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals  
 ENTRY MONTH: 200206  
 ENTRY DATE: Entered STN: 22 May 2002

Last Updated on STN: 5 Jun 2002

Entered Medline: 4 Jun 2002

## ABSTRACT:

Diabetic retinopathy remains a leading cause of irreversible blindness. A critical early pathology in the disease is the adhesion of leukocytes to the retinal vasculature, a process that occurs, in part, via intercellular adhesion molecule-1. Once leukocyte adhesion occurs, endothelial cell injury ensues, as does blood-retinal barrier breakdown. Here we show that angiopoietin-1 can prevent and reverse these diabetic retinal vascular changes in both new and established diabetes. Angiopoietin-1, when given intravitreally to newly diabetic rats, normalized retinal vascular endothelial growth factor (VEGF) and intercellular adhesion molecule-1 mRNA and protein levels, leading to reductions in leukocyte adhesion, endothelial cell injury, and blood-retinal barrier breakdown. When an adenovirus coding for angiopoietin-1 was given systemically to mice with established diabetes, it similarly inhibited leukocyte adhesion and endothelial cell injury and blood-retinal barrier breakdown. These changes coincided with reductions in retinal eNOS, nitric oxide, Akt (protein kinase B), and MAP kinase activity, known mediators of VEGF \*\*\*bioactivity\*\*\* and leukocyte adhesion. When endogenous VEGF \*\*\*bioactivity\*\*\* was inhibited with a soluble Flt-1/Fc chimera, retinal Akt kinase activity was significantly reduced in vivo. Taken together, these data document new vascular and anti-inflammatory **bioactivities** for angiopoietin-1 and identify it as the first naturally occurring protein that directly protects the retinal vasculature in diabetes.

## CONTROLLED TERM:

Check Tags: Male  
 Angiopoietin-1  
 Animals  
 Blood-Retinal Barrier: DE, drug effects  
 Cattle  
 Cell Adhesion: DE, drug effects  
 \*Diabetic Retinopathy: DT, drug therapy  
 Diabetic Retinopathy: ME, metabolism  
 Diabetic Retinopathy: PA, pathology  
 Dose-Response Relationship, Drug  
 Endothelial Growth Factors: GE, genetics  
 Endothelial Growth Factors: ME, metabolism  
 Endothelium, Vascular: DE, drug effects  
 Endothelium, Vascular: PA, pathology  
 Enzyme Activation: DE, drug effects  
 Intercellular Adhesion Molecule-1: GE, genetics  
 Intercellular Adhesion Molecule-1: ME, metabolism  
 Leukocytes: CY, cytology  
 Leukocytes: ME, metabolism  
 Lymphokines: GE, genetics  
 Lymphokines: ME, metabolism  
 \*Membrane Glycoproteins: PD, pharmacology  
 \*Membrane Glycoproteins: TU, therapeutic use  
 Mice  
 Mice, Inbred C57BL  
 Mitogen-Activated Protein Kinases: DE, drug effects  
 Mitogen-Activated Protein Kinases: ME, metabolism  
 Nitric Oxide: ME, metabolism  
 Nitric Oxide Synthase: BI, biosynthesis  
 Nitric Oxide Synthase: DE, drug effects  
 Nitric Oxide Synthase Type II  
 Nitric Oxide Synthase Type III  
 \*Protein-Serine-Threonine Kinases  
 Proto-Oncogene Proteins: ME, metabolism  
 Proto-Oncogene Proteins c-akt  
 RNA, Messenger: DE, drug effects

RNA, Messenger: GE, genetics  
 RNA, Messenger: ME, metabolism  
 Rats  
 Rats, Long-Evans  
 Research Support, Non-U.S. Gov't  
 Research Support, U.S. Gov't, P.H.S.  
 Retina: DE, drug effects  
 Retina: ME, metabolism  
 Retina: PA, pathology  
 Vascular Endothelial Growth Factor A  
 Vascular Endothelial Growth Factors  
 CAS REGISTRY NO.: 10102-43-9 (Nitric Oxide); 126547-89-5 (Intercellular Adhesion Molecule-1)  
 CHEMICAL NAME: 0 (Agpt protein, mouse); 0 (Agpt protein, rat); 0 (Angiopoietin-1); 0 (Endothelial Growth Factors); 0 (Lymphokines); 0 (Membrane Glycoproteins); 0 (Proto-Oncogene Proteins); 0 (RNA, Messenger); 0 (Vascular Endothelial Growth Factor A); 0 (Vascular Endothelial Growth Factors); EC 1.14.13.39 (Nitric Oxide Synthase); EC 1.14.13.39 (Nitric Oxide Synthase Type II); EC 1.14.13.39 (Nitric Oxide Synthase Type III); EC 1.14.13.39 (Nos3 protein, mouse); EC 1.14.13.39 (Nos3 protein, rat); EC 2.7.1.37 (Akt1 protein, rat); EC 2.7.1.37 (Mitogen-Activated Protein Kinases); EC 2.7.1.37 (Protein-Serine-Threonine Kinases); EC 2.7.1.37 (Proto-Oncogene Proteins c-akt)

L173 ANSWER 57 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2002495903 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 12352871  
 TITLE: New drugs 2002, part III.  
 AUTHOR: Hussar Daniel A  
 CORPORATE SOURCE: Philadelphia College of Pharmacy, University of the Sciences, PA, USA.  
 SOURCE: Nursing, (2002 Jul) Vol. 32, No. 7, pp. 55-62; quiz 62-4. Journal code: 7600137. ISSN: 0360-4039.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Nursing Journals  
 ENTRY MONTH: 200211  
 ENTRY DATE: Entered STN: 3 Oct 2002  
 Last Updated on STN: 13 Dec 2002  
 Entered Medline: 6 Nov 2002  
 CONTROLLED TERM: \*Adenine: AA, analogs & derivatives  
 Adenine: PD, pharmacology  
 Adenine: TU, therapeutic use  
 Anti-Bacterial Agents: PD, pharmacology  
 Anti-Bacterial Agents: TU, therapeutic use  
 Anti-HIV Agents: PD, pharmacology  
 Anti-HIV Agents: TU, therapeutic use  
 Anti-Infective Agents: PD, pharmacology  
 Anti-Infective Agents: TU, therapeutic use  
**Antihypertensive Agents: PD, pharmacology**  
**Antihypertensive Agents: TU, therapeutic use**  
 Antirheumatic Agents: PD, pharmacology  
 Antirheumatic Agents: TU, therapeutic use  
 Bone Resorption: DT, drug therapy  
 Cephalosporins: PD, pharmacology  
 Cephalosporins: TU, therapeutic use

Diphosphonates: PD, pharmacology  
 Diphosphonates: TU, therapeutic use  
 Drug Approval  
 Drug Therapy: AE, adverse effects  
 Drug Therapy: NU, nursing  
 \*Drug Therapy: ST, standards  
 \*Erythropoietin: AA, analogs & derivatives  
 Erythropoietin: PD, pharmacology  
 Erythropoietin: TU, therapeutic use  
 Heart Failure, Congestive: DT, drug therapy  
 Humans  
 Hypoglycemic Agents: PD, pharmacology  
 Hypoglycemic Agents: TU, therapeutic use  
 Imidazoles: PD, pharmacology  
 Imidazoles: TU, therapeutic use  
 Indoles: PD, pharmacology  
 Indoles: TU, therapeutic use  
 \*Insulin: AA, analogs & derivatives  
 Insulin: PD, pharmacology  
 Insulin: TU, therapeutic use  
 Natriuretic Agents: PD, pharmacology  
 Natriuretic Agents: TU, therapeutic use  
 Natriuretic Peptide, Brain  
 Organophosphorus Compounds: PD, pharmacology  
 Organophosphorus Compounds: TU, therapeutic use  
 \*Phosphonic Acids  
 Protein C: PD, pharmacology  
 Protein C: TU, therapeutic use  
 Recombinant Proteins: PD, pharmacology  
 Recombinant Proteins: TU, therapeutic use  
 Serotonin Agonists: PD, pharmacology  
 Serotonin Agonists: TU, therapeutic use  
     **Sialoglycoproteins: PD, pharmacology**  
 Sialoglycoproteins: TU, therapeutic use  
 Sulfonamides: PD, pharmacology  
 Sulfonamides: TU, therapeutic use  
 Tryptamines

CAS REGISTRY NO.: 11061-68-0 (Insulin); 11096-26-7 (Erythropoietin);  
 114471-18-0 (Natriuretic Peptide, Brain); 117467-28-4  
 (cefditoren pivoxil); 118072-93-8 (zoledronic acid);  
 147536-97-8 (bosentan); 154323-57-6 (almotriptan);  
 209810-58-2 (darbepoetin alfa); 73-24-5 (Adenine)  
 CHEMICAL NAME: 0 (Anti-Bacterial Agents); 0 (Anti-HIV Agents); 0  
 (Anti-Infective Agents); 0 (Antihypertensive Agents); 0  
 (Antirheumatic Agents); 0 (Cephalosporins); 0  
 (Diphosphonates); 0 (Hypoglycemic Agents); 0 (Imidazoles);  
 0 (Indoles); 0 (Natriuretic Agents); 0 (Organophosphorus  
 Compounds); 0 (Phosphonic Acids); 0 (Protein C); 0  
 (Recombinant Proteins); 0 (Serotonin Agonists); 0  
 (Sialoglycoproteins); 0 (Sulfonamides); 0 (Tryptamines); 0  
 (drotrecogin alfa activated); 0 (insulin, Asp(B28)-); 0  
 (interleukin 1 receptor antagonist protein); 0 (tenofovir  
 disoproxil)

L173 ANSWER 58 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2002169689 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 11903406  
 TITLE: A possible hypoglycaemic effect of **maitake**  
 mushroom on Type 2 **diabetic** patients.  
 AUTHOR: Konno S; Tortorelis D G; Fullerton S A; Samadi A A;

SOURCE: Hettiarachchi J; Tazaki H  
 Diabetic medicine : a journal of the British Diabetic Association, (2001 Dec) Vol. 18, No. 12, pp. 1010.  
 Journal code: 8500858. ISSN: 0742-3071.

PUB. COUNTRY: England: United Kingdom  
 DOCUMENT TYPE: (CASE REPORTS)  
 Letter

LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200206  
 ENTRY DATE: Entered STN: 21 Mar 2002  
 Last Updated on STN: 15 Jun 2002  
 Entered Medline: 14 Jun 2002

CONTROLLED TERM: Check Tags: Male  
 Adult  
 \*Agaricales  
 Blood Glucose: ME, metabolism  
 \*Diabetes Mellitus, Type 2: BL, blood  
 Glyburide: TU, therapeutic use  
 Humans  
 \*Hypoglycemia: ET, etiology  
 Hypoglycemic Agents: TU, therapeutic use

CAS REGISTRY NO.: 10238-21-8 (Glyburide)  
 CHEMICAL NAME: 0 (Blood Glucose); 0 (Hypoglycemic Agents)

L173 ANSWER 59 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2001569596 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 11676011  
 TITLE: Relationship between solubility of grifolan, a fungal 1,3-beta-D-glucan, and production of tumor necrosis factor by macrophages in vitro.

AUTHOR: Ishibashi K; Miura N N; Adachi Y; Ohno N; Yadomae T  
 CORPORATE SOURCE: Laboratory for Immunopharmacology for Microbial Products, School of Pharmacy, Tokyo University of Pharmacy and Life Science, Hachioji, Japan.

SOURCE: Bioscience, biotechnology, and biochemistry, (2001 Sep) Vol. 65, No. 9, pp. 1993-2000.  
 Journal code: 9205717. ISSN: 0916-8451.

PUB. COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200205  
 ENTRY DATE: Entered STN: 29 Oct 2001  
 Last Updated on STN: 7 May 2002  
 Entered Medline: 6 May 2002

ABSTRACT:  
 Grifolan, GRN, is a fungal antitumor beta-glucan isolated from **Grifola frondosa**. Various studies suggested that the underlying mechanism of the antitumor activity of GRN is strongly related to immune modulation. In the previous publication (Adachi et al., 1994; Okazaki et al., 1995), we have shown that GRN activates macrophages to produce tumor necrosis factor (TNF) in vitro. In this study, the structural unit essential to produce TNF was examined by chemical modifications of GRN. GRN suspended in distilled water was treated at 150 degrees C for up to 3 h. Addition of the resulting turbid solution to the RAW 264.7 macrophage-like cell line produced TNF, and the relative activity was diminished in relation to the heat treatment period. The fractions with a heating period longer than 15 min did not show any activity. After centrifugation of the resulting solution, significant activity was shown by precipitate fractions, suggesting that the insoluble form of GRN is important

for TNF production. Interestingly, the precipitate fraction obtained from 9 min of treatment also had significant activity. In addition, admixing the soluble fraction with the particles significantly inhibited the TNF production. In contrast to these observations, the high-molecular-mass subfraction of the soluble fraction prepared by ultrafiltration produced significant amounts of TNF. Similar phenomena were shown with sodium hydroxide treatment and dimethylsulfoxide treatment. These facts strongly suggested that insoluble as well as a high molecular mass soluble form of GRN are required for TNF production by macrophages.

CONTROLLED TERM:      Animals  
                          \*Antibiotics, Antineoplastic: CH, chemistry  
                          \*Antibiotics, Antineoplastic: PD, pharmacology  
                          Biochemistry: MT, methods  
                          Cell Line  
                          \*Glucans: CH, chemistry  
                          \*Glucans: PD, pharmacology  
                          Heat  
                          Macrophages: DE, drug effects  
                          \*Macrophages: ME, metabolism  
                          Mice  
                          **Molecular Weight**  
                          Research Support, Non-U.S. Gov't  
                          Solubility  
                          \*Tumor Necrosis Factor-alpha: ME, metabolism  
                          \*beta-Glucans  
 CAS REGISTRY NO.:    104074-36-4 (grifolan)  
 CHEMICAL NAME:        0 (Antibiotics, Antineoplastic); 0 (Glucans); 0 (Tumor  
                          Necrosis Factor-alpha); 0 (beta-Glucans)

L173 ANSWER 60 OF 99      MEDLINE on STN  
 ACCESSION NUMBER:    2001542541      MEDLINE  
 DOCUMENT NUMBER:    PubMed ID: 11589426  
 TITLE:                TX14(A), a prosaposin-derived peptide, reverses established  
                          nerve disorders in streptozotocin-diabetic rats and  
                          prevents them in galactose-fed rats.  
 AUTHOR:               Mizisin A P; Steinhardt R C; O'Brien J S; Calcutt N A  
 CORPORATE SOURCE:    Department of Pathology, School of Medicine, University of  
                          California, San Diego, La Jolla, 92093-0612, USA.  
 CONTRACT NUMBER:    NS38855 (NINDS)  
 SOURCE:                Journal of neuropathology and experimental neurology, (2001  
                          Oct) Vol. 60, No. 10, pp. 953-60.  
                          Journal code: 2985192R. ISSN: 0022-3069.  
 PUB. COUNTRY:        United States  
 DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE:            English  
 FILE SEGMENT:        Priority Journals  
 ENTRY MONTH:         200110  
 ENTRY DATE:           Entered STN: 9 Oct 2001  
                          Last Updated on STN: 29 Oct 2001  
                          Entered Medline: 25 Oct 2001

# ABSTRACT:

Recently, TX14(A), a prosaposin-derived neurotrophic peptide, was shown to prevent both large and small fiber deficits in streptozotocin diabetes. Here, the efficacy of TX14(A) in reversing established nerve conduction disorders in streptozotocin diabetes, a model of insulin deficiency, and preventing them in galactose feeding, an insulin-replete model of polyol pathway flux, was investigated. Following streptozotocin injection (50 mg/kg ip), TX14(A) treatment (1 mg/kg ip thrice weekly) was initiated in half of the animals. After 8 wk, treatment was begun in half of the untreated animals and discontinued in half of the treated animals, and the experiment continued for 6

wk. TX14(A) reversed established motor and sensory nerve conduction deficits in streptozotocin-diabetic rats and the impact of previous treatment was still evident 3 wk after withdrawal. With the onset of 40% galactose feeding, the same dose of TX14(A) was given to half of the control and half of the galactose-fed animals for 16 wk. TX14(A) was without effect in control animals but it attenuated motor and sensory nerve conduction deficits in galactose-fed rats, an effect associated with amelioration of axonal dwindling in the sciatic nerve. These observations extend the therapeutic utility of TX14(A) and highlight its potential in treating established diabetic neuropathy.

CONTROLLED TERM: Check Tags: Female

Animals

Axons: DE, drug effects

Axons: PA, pathology

Blood Glucose: PH, physiology

Body Weight: DE, drug effects

Diabetes Mellitus, Experimental: CO, complications

\*Diabetes Mellitus, Experimental: DT, drug therapy

Diabetic Neuropathies: DT, drug therapy

\*Diabetic Neuropathies: PC, prevention & control

Diet

\*Galactose: AD, administration & dosage

\*Glycoproteins

Glycoproteins: PD, pharmacology

Glycoproteins: TU, therapeutic use

Injections, Intraperitoneal

Motor Neurons: DE, drug effects

Motor Neurons: PA, pathology

\*Nerve Growth Factors: PD, pharmacology

Nerve Growth Factors: TU, therapeutic use

Neural Conduction: DE, drug effects

Neurons, Afferent: DE, drug effects

Neurons, Afferent: PA, pathology

\*Peptides: PD, pharmacology

Peptides: TU, therapeutic use

Rats

Rats, Sprague-Dawley

Research Support, Non-U.S. Gov't

Research Support, U.S. Gov't, P.H.S.

Saposins

Streptozocin: AD, administration & dosage

CAS REGISTRY NO.: 18883-66-4 (Streptozocin); 26566-61-0 (Galactose)

CHEMICAL NAME: 0 (Blood Glucose); 0 (Glycoproteins); 0 (Nerve Growth Factors); 0 (Peptides); 0 (Psap protein, rat); 0 (Saposins); 0 (prosaptide)

L173 ANSWER 61 OF 99 MEDLINE on STN

ACCESSION NUMBER: 2001495043 MEDLINE

DOCUMENT NUMBER: PubMed ID: 11520942

TITLE: Cholesterol-lowering effects of maitake (*Grifola frondosa*) fiber, shiitake (*Lentinus edodes*) fiber, and enokitake (*Flammulina velutipes*) fiber in rats.

AUTHOR: Fukushima M; Ohashi T; Fujiwara Y; Sonoyama K; Nakano M

CORPORATE SOURCE: Department of Bioresource Science, Obihiro University of Agriculture and Veterinary Medicine, Obihiro, Hokkaido 080-8555, Japan.. fukushim@obihiro.ac.jp

SOURCE: Experimental biology and medicine (Maywood, N.J.), (2001 Sep) Vol. 226, No. 8, pp. 758-65.

Journal code: 100973463. ISSN: 1535-3702.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200109  
 ENTRY DATE: Entered STN: 10 Sep 2001  
 Last Updated on STN: 1 Oct 2001  
 Entered Medline: 27 Sep 2001

## ABSTRACT:

The effects of mushroom fibers on serum cholesterol and hepatic low-density lipoprotein (LDL) receptor mRNA in rats were investigated. Rats were fed a cholesterol-free diet with 50 g/kg cellulose powder (CP), 50 g/kg \*\*\*maitake\*\*\* (*Grifola frondosa*) fiber (MAF), 50 g/kg shiitake (*Lentinus edodes*) fiber (SF), or 50 g/kg enokitake (*Flammulina velutipes*) fiber (EF) for 4 weeks. There were no significant differences in the body \*\*\*weight\*\*\*, food intake, liver weight, cecum weight, and cecum pH among the groups. Cecal acetic acid, butyric acid, and total short-chain fatty acid (SCFA) concentrations in the SF and EF groups were significantly higher than those in the other groups. The serum total cholesterol concentration in the CP group was significantly higher than that in the MAF and EF groups. The very LDL (VLDL) + intermediate-density lipoprotein (IDL) + LDL-cholesterol concentration in the CP group was significantly higher than that in the MAF, SF, and EF groups, whereas the high-density lipoprotein (HDL)-cholesterol concentration in the EF group was significantly lower than that in the other groups at the end of the 4-week feeding period. The hepatic LDL receptor mRNA level in the EF group was significantly higher than that in the CP group. The fecal cholesterol excretion in the MAF, SF, and EF groups was significantly higher than that in the CP group. The results of this study demonstrate that MAF and EF lowered the serum total cholesterol level by enhancement of fecal cholesterol excretion, and in particular, by enhancement of hepatic LDL receptor mRNA in EF group.

CONTROLLED TERM: Check Tags: Male  
 Acetic Acid: ME, metabolism  
 \*Agaricales: CH, chemistry  
 Animals  
 Blotting, Southern  
 Body Weight: DE, drug effects  
 Butyric Acids: ME, metabolism  
 Cecum: ME, metabolism  
 \*Cholesterol: ME, metabolism  
 Cholesterol 7-alpha-Hydroxylase: ME, metabolism  
 \*Dietary Fiber: TU, therapeutic use  
 Fatty Acids, Volatile: ME, metabolism  
 Hydrogen-Ion Concentration  
 Hydroxymethylglutaryl CoA Reductases: ME, metabolism  
 \*Hypercholesterolemia: DT, drug therapy  
 \*Lentinula: CH, chemistry  
 Liver: EN, enzymology  
 Organ Size: DE, drug effects  
 \*Plant Extracts: TU, therapeutic use  
 RNA: ME, metabolism  
 RNA, Messenger: ME, metabolism  
 Rats  
 Rats, Inbred F344  
 Receptors, LDL: ME, metabolism  
 Reverse Transcriptase Polymerase Chain Reaction  
 \*Shiitake Mushrooms: TU, therapeutic use  
 Time Factors  
 CAS REGISTRY NO.: 57-88-5 (Cholesterol); 63231-63-0 (RNA); 64-19-7 (Acetic Acid)  
 CHEMICAL NAME: 0 (Butyric Acids); 0 (Fatty Acids, Volatile); 0 (Plant Extracts); 0 (RNA, Messenger); 0 (Receptors, LDL); EC

1.1.1.- (Hydroxymethylglutaryl CoA Reductases); EC  
 1.14.13.17 (Cholesterol 7-alpha-Hydroxylase)

L173 ANSWER 62 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2001519600 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 11566496  
 TITLE: Effects of **maitake** (*Grifola frondosa*)  
 D-Fraction on the carcinoma angiogenesis.  
 AUTHOR: Matsui K; Kodama N; Nanba H  
 CORPORATE SOURCE: Department of Microbial chemistry, Kobe Pharmaceutical  
 University, 19-1, Motoyama-kitamachi 4-chome,  
 Higashinada-ku, 658-8558, Kobe, Japan.  
 SOURCE: Cancer letters, (2001 Oct 30) Vol. 172, No. 2, pp. 193-8.  
 Journal code: 7600053. ISSN: 0304-3835.  
 PUB. COUNTRY: Ireland  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200111  
 ENTRY DATE: Entered STN: 24 Sep 2001  
 Last Updated on STN: 5 Nov 2001  
 Entered Medline: 1 Nov 2001

## ABSTRACT:

We have reported that D-Fraction **extracted** from **maitake** (  
 \*\*\**Grifola*\*\*\* *frondosa*), activates immune competent cells, and indicates  
 anti-tumor activities. The D-Fraction was observed to induce angiogenesis in  
 vivo and to enhance the proliferation capability and migration capability of  
 human vascular endothelial cell in vitro. The D-Fraction also increased plasma  
 vascular endothelial growth factor (VEGF) concentration significantly. Also  
 VEGF and TNF-alpha production by the activated peritoneal macrophages were  
 enhanced. These results suggest that the anti-tumor activity of the D-Fraction  
 is not only associated with the activation of the immuno-competent cells but  
 also possibly related to the carcinoma angiogenesis induction.

CONTROLLED TERM: Check Tags: Male  
 Animals  
 \*Antineoplastic Agents: PD, pharmacology  
 Endothelial Growth Factors: BI, biosynthesis  
 Endothelial Growth Factors: BL, blood  
 Endothelium, Vascular: CY, cytology  
 Endothelium, Vascular: DE, drug effects  
 \*Fungal Proteins: PD, pharmacology  
 \***Glycoproteins: PD, pharmacology**  
 Humans  
 Lymphokines: BI, biosynthesis  
 Lymphokines: BL, blood  
 Mice  
 Mice, Inbred C3H  
 \*Neoplasms, Experimental: BS, blood supply  
 Neoplasms, Experimental: DT, drug therapy  
 \*Neovascularization, Pathologic: CI, chemically induced  
 \*Polyporaceae: CH, chemistry  
**Tumor Necrosis Factor-alpha: BI, biosynthesis**  
 Vascular Endothelial Growth Factor A  
 Vascular Endothelial Growth Factors  
 CHEMICAL NAME: 0 (Antineoplastic Agents); 0 (Endothelial Growth Factors);  
 0 (Fungal Proteins); 0 (**Glycoproteins**); 0  
 (Lymphokines); 0 (Tumor Necrosis Factor-alpha); 0 (Vascular  
 Endothelial Growth Factor A); 0 (Vascular Endothelial  
 Growth Factors)

L173 ANSWER 63 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2002009942 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 11349892  
 TITLE: **Maitake** (*Grifola frondosa*) improve  
 glucose tolerance of experimental **diabetic** rats.  
 AUTHOR: Horio H; Ohtsuru M  
 CORPORATE SOURCE: Department of Food Science and Nutrition, Faculty of Home  
 Economics, Nishikyushu University, Saga, Japan.  
 SOURCE: Journal of nutritional science and vitaminology, (2001 Feb)  
 Vol. 47, No. 1, pp. 57-63.  
 Journal code: 0402640. ISSN: 0301-4800.  
 PUB. COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200202  
 ENTRY DATE: Entered STN: 21 Jan 2002  
 Last Updated on STN: 5 Feb 2002  
 Entered Medline: 4 Feb 2002

## ABSTRACT:

We have previously reported that rats with **diabetes** induced by injecting streptozotocin into neonates showed remarkably lower blood glucose, urine volume, and glucosuria after administration of **Maitake** (**\*\*\*Grifola\*\*\*** frondosa). In the present study, we investigated the effects of **Maitake** on insulin concentration, organ weight, serum composition, and islets of Langerhans in streptozotocin-induced **diabetic** rats using the same method. The **diabetic** rats were produced by injecting 80 mg/kg B.W. streptozotocin into 2-d-old neonates. From the age of 9 wk, the rats were given experimental diets for 100 d. The **diabetes** and control groups were given either diets containing 20% **Maitake** (DM and CM groups) or control diets (D and C groups). During administration of the experimental diets, we measured **body weight**, food intake, amount of feces, and serum insulin concentration at glucose loading. The glucose tolerance test was performed at the 10th week after the start of the experimental diets. The D group had an initial fasting blood glucose of 225+/-49 mg/dL, and a maximum blood glucose of 419+/-55 mg/dL at 60 min. In the DM group, however, the initial fasting blood glucose was 170+/-23 mg/dL, and the maximum blood glucose was 250+/-41 mg/dL at 15 min. Both values were markedly lower than those in the D group (p<0.05). The insulin concentration at 15 min. after glucose loading in the DM group was 41+/-16 microU/mL, which was significantly higher than that in the D group (15+/-7 microU/mL) (p<0.05). After the 100-d experimental period, blood samples were collected. The fructosamine level was significantly lower in the DM group (152+/-21 mmol/L) than in the D group (185+/-13 mmol/L). The concentration of 1.5-A.G. (1.5-anhydro glucitol) was significantly higher in the DM group (9.33+/-2.42 microg/mL) than in the D group (1.33+/-0.52 microg/mL). Observation of insulin antibody stain in the Langerhans cells of the pancreas using ABC method showed a decrease insulin antibody stain in the D group. The cells of the DM group were stained more darkly than those of the D group. From these results, we postulated that the bioactive substances present in **Maitake** can ameliorate the symptoms of **diabetes**.

CONTROLLED TERM: Check Tags: Female; Male  
 Animals  
 Area Under Curve  
 \*Blood Glucose: ME, metabolism  
**Diabetes Mellitus, Experimental: CI, chemically induced**  
**\*Diabetes Mellitus, Experimental: DT, drug therapy**  
 Feces: CH, chemistry  
 \*Glucans: PD, pharmacology

Glucans: TU, therapeutic use  
 Glucose Tolerance Test  
 Immunohistochemistry  
 \*Insulin: BL, blood  
 Insulin: SE, secretion  
 \*Islets of Langerhans: DE, drug effects  
 Islets of Langerhans: SE, secretion  
 Organ Size: DE, drug effects  
 \*Polyporaceae: CH, chemistry  
 Rats

CAS REGISTRY NO.: 11061-68-0 (Insulin)  
 CHEMICAL NAME: 0 (Blood Glucose); 0 (Glucans)

L173 ANSWER 64 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 2002205267 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 11207456  
 TITLE: **Maitake** extracts and their therapeutic potential.  
 AUTHOR: Mayell Mmmayell@mediaone.net  
 SOURCE: Alternative medicine review : a journal of clinical  
 therapeutic, (2001 Feb) Vol. 6, No. 1, pp. 48-60. Ref: 44  
 Journal code: 9705340. ISSN: 1089-5159.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 General Review; (REVIEW)  
 LANGUAGE: English  
 FILE SEGMENT: Consumer Health  
 ENTRY MONTH: 200205  
 ENTRY DATE: Entered STN: 10 Apr 2002  
 Last Updated on STN: 5 May 2002  
 Entered Medline: 3 May 2002

## ABSTRACT:

**Maitake** (*Grifola frondosa*) is the Japanese name for an edible fungus with a large fruiting body characterized by overlapping caps. It is a premier culinary as well as medicinal mushroom. **Maitake** is increasingly being recognized as a potent source of polysaccharide compounds with dramatic health-promoting potential. The most recent development is the MD-fraction, a proprietary **maitake** extract its Japanese inventors consider to be a notable advance upon the preceding D-fraction. The D-fraction, the MD-fraction, and other extracts, often in combination with whole **maitake** powder, have shown particular promise as immunomodulating agents, and as an adjunct to cancer and HIV therapy. They may also provide some benefit in the treatment of **hyperlipidemia**, **\*\*\*hypertension\*\*\***, and hepatitis.

CONTROLLED TERM: Adjuvants, Immunologic: PD, pharmacology  
 Adjuvants, Immunologic: TU, therapeutic use  
 Administration, Oral  
 Animals  
 \*Anti-HIV Agents  
 Anti-HIV Agents: PD, pharmacology  
 Anti-HIV Agents: TU, therapeutic use  
 \*Antibiotics, Antineoplastic  
 Antibiotics, Antineoplastic: PD, pharmacology  
 Antibiotics, Antineoplastic: TU, therapeutic use  
 \*Antilipemic Agents  
 Antilipemic Agents: PD, pharmacology  
 Antilipemic Agents: TU, therapeutic use  
**Body Weight: DE, drug effects**  
 Drug Administration Schedule  
 \*Glucans  
 Glucans: PD, pharmacology

Glucans: TU, therapeutic use  
 \*HIV Infections: DT, drug therapy  
 Humans  
     **Hyperlipidemia: DT, drug therapy**  
     **Hypertension: DT, drug therapy**  
 Liver Diseases: DT, drug therapy  
 \*Neoplasms: DT, drug therapy  
 Polyporaceae  
 \*beta-Glucans

CAS REGISTRY NO.: 104074-36-4 (grifolan)  
 CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Anti-HIV Agents); 0  
 (Antibiotics, Antineoplastic); 0 (Antilipemic Agents); 0  
 (Glucans); 0 (beta-Glucans)

L173 ANSWER 65 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 97399293 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 9255420  
 TITLE: Anti-hyperliposis effect of **maitake** fruit body (  
**Grifola frondosa**). I.  
 AUTHOR: Kubo K; Nanba H  
 CORPORATE SOURCE: Department of Microbial Chemistry, Kobe Pharmaceutical  
 University, Japan.  
 SOURCE: Biological & pharmaceutical bulletin, (1997 Jul) Vol. 20,  
 No. 7, pp. 781-5.  
 Journal code: 9311984. ISSN: 0918-6158.  
 PUB. COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199710  
 ENTRY DATE: Entered STN: 21 Oct 1997  
 Last Updated on STN: 29 Jan 1999  
 Entered Medline: 9 Oct 1997

## ABSTRACT:

Experimental rat models (5-week-old Sprague-Dawley rats) with hyperlipemia were prepared by feeding high-cholesterol feed containing sodium cholate and casein as a protein source. Dried **maitake** (*Grifola frondosa*) powder was mixed with the basic high-cholesterol feed and the serum lipids were periodically measured. Values of cholesterol, triglyceride and phospholipid in serum of rats in the **maitake**-feed group were suppressed by 0.3-0.8 times those in animals fed the basic feed, the latter values being close to those in rats given normal feed. The value of high density lipoprotein (HDL)-cholesterol in serum which is generally reduced by the ingestion of high-cholesterol feed remained the level it was at the beginning of the experiment. Weights of extirpated liver and epididymal fat-pads were significantly less (0.6-0.7 times) than those in the basic feed group, indicating that **maitake** inhibits lipid accumulation in the body. Liver lipids were also measured and the values were found to be decreased by \*\*\***maitake**\*\*\* administration as true of serum lipid, suggesting \*\*\***maitake**\*\*\* has an anti-liver lipid activity. Measurement of the amount of total cholesterol and bile acid in feces showed, the **ratio** of cholesterol-excretion had increased 1.8 times and bile acid-excretion 3 fold by \*\*\***maitake**\*\*\* treatment. From these results, it is believed that \*\*\***maitake**\*\*\* helps to improve the lipid metabolism as it inhibits both liver lipid and serum lipid which are increased by the ingestion of high-fat feed.

CONTROLLED TERM: Check Tags: Male  
 Animals  
 \*Basidiomycota: CH, chemistry  
 Bile Acids and Salts: ME, metabolism  
     **Body Weight**

Cholesterol: ME, metabolism  
Feces: CH, chemistry  
\*Hyperlipidemia: TH, therapy  
Lipid Metabolism  
Lipoproteins, HDL Cholesterol: BL, blood  
Liver: ME, metabolism  
Organ Size  
Rats  
Rats, Sprague-Dawley  
CAS REGISTRY NO.: 57-88-5 (Cholesterol)  
CHEMICAL NAME: 0 (Bile Acids and Salts); 0 (Lipoproteins, HDL Cholesterol)

L173 ANSWER 66 OF 99 MEDLINE on STN  
ACCESSION NUMBER: 96254085 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 8664344  
TITLE: Angiotensin II induces TIMP-1 production in rat heart endothelial cells.  
AUTHOR: Chua C C; Hamdy R C; Chua B H  
CORPORATE SOURCE: Division of Geriatric Medicine, East Tennessee State University, Johnson City 37614-0429, USA.  
CONTRACT NUMBER: HL 37011 (NHLBI)  
SOURCE: Biochimica et biophysica acta, (1996 May 28) Vol. 1311, No. 3, pp. 175-80.  
Journal code: 0217513. ISSN: 0006-3002.  
PUB. COUNTRY: Netherlands  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199608  
ENTRY DATE: Entered STN: 19 Aug 1996  
Last Updated on STN: 6 Feb 1998  
Entered Medline: 8 Aug 1996

## ABSTRACT:

Angiotensin II (AII) was found to upregulate tissue inhibitor of metalloproteinases-1 (TIMP-1) gene expression in rat heart endothelial cells in a dose and time-dependent manner. The maximal stimulation of TIMP-1 mRNA was achieved by 2 h after the addition of AII. This effect was blocked by losartan, an AT1 receptor antagonist and by calphostin C, a protein kinase C inhibitor. Addition of cycloheximide superinduced and actinomycin D abolished the induction. These results suggest that AII stimulates TIMP-1 production by a protein kinase C dependent pathway which is dependent upon de novo RNA synthesis. Immunoprecipitation experiment showed an enhanced band of 28 kDa from the conditioned medium of AII-treated cultures. Immunoblot analysis revealed that TIMP-1 was detectable in the conditioned medium 4 h after AII stimulation. Since endothelial cells line the blood vessels and sense the rise in AII associated with hypertension, the TIMP-1 released by these cells may provide an initial trigger leading to cardiac fibrosis in angiotensin-renin dependent hypertension.

CONTROLLED TERM: \*Angiotensin II: PD, pharmacology  
Animals  
Antihypertensive Agents: PD, pharmacology  
Biphenyl Compounds: PD, pharmacology  
Cells, Cultured  
Culture Media, Conditioned  
Endothelium: ME, metabolism  
Enzyme Inhibitors: PD, pharmacology  
\*Glycoproteins: BI, biosynthesis  
Glycoproteins: PD, pharmacology  
Imidazoles: PD, pharmacology  
Losartan

\*Myocardium: ME, metabolism  
 \*Protease Inhibitors: ME, metabolism  
 Protease Inhibitors: PD, pharmacology  
 Protein Kinase C: AI, antagonists & inhibitors  
 Protein Synthesis Inhibitors: PD, pharmacology  
 Pyridines: PD, pharmacology  
 RNA, Messenger: ME, metabolism  
 Rats  
 Research Support, Non-U.S. Gov't  
 Research Support, U.S. Gov't, P.H.S.  
 Tetrazoles: PD, pharmacology  
 Tissue Inhibitor of Metalloproteinases  
 Up-Regulation  
 Vasoconstrictor Agents: PD, pharmacology

CAS REGISTRY NO.: 11128-99-7 (Angiotensin II); 114798-26-4 (Losartan);  
 130663-39-7 (PD 123319)

CHEMICAL NAME: 0 (Antihypertensive Agents); 0 (Biphenyl Compounds); 0  
 (Culture Media, Conditioned); 0 (Enzyme Inhibitors); 0  
 (Glycoproteins); 0 (Imidazoles); 0 (Protease Inhibitors); 0  
 (Protein Synthesis Inhibitors); 0 (Pyridines); 0 (RNA,  
 Messenger); 0 (Tetrazoles); 0 (Tissue Inhibitor of  
 Metalloproteinases); 0 (Vasoconstrictor Agents); EC  
 2.7.1.37 (Protein Kinase C)

L173 ANSWER 67 OF 99 MEDLINE on STN

ACCESSION NUMBER: 96388538 MEDLINE

DOCUMENT NUMBER: PubMed ID: 8795938

TITLE: The effect of **maitake** mushrooms on liver and  
 serum lipids.

AUTHOR: Kubo K; Nanba H

CORPORATE SOURCE: Department of Microbial Chemistry, Kobe Pharmaceutical  
 University, Japan.

SOURCE: Alternative therapies in health and medicine, (1996 Sep)  
 Vol. 2, No. 5, pp. 62-6.  
 Journal code: 9502013. ISSN: 1078-6791.

PUB. COUNTRY: United States

DOCUMENT TYPE: (CLINICAL TRIAL)  
 Journal; Article; (JOURNAL ARTICLE)  
 (RANDOMIZED CONTROLLED TRIAL)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199610

ENTRY DATE: Entered STN: 6 Nov 1996  
 Last Updated on STN: 29 Jan 1999  
 Entered Medline: 23 Oct 1996

#### ABSTRACT:

OBJECTIVE: To determine the efficacy of **maitake** mushrooms in  
 inhibiting the elevation of liver and serum lipids in rats. DESIGN:  
 Sprague-Dawley rats with **hyperlipidemia** were used to measure and  
 compare the values of cholesterol, phospholipids, and triglycerides between  
 cholesterol-fed rats and rats whose diets were fortified with 20%  
 \*\*\*maitake\*\*\* mushroom dried powder. RESULTS: The values in **maitake**  
 -fed rats were consistently less than those in the basic cholesterol-fed rats.  
 The value of high-density lipoprotein cholesterol, which usually is decreased  
 by taking high-cholesterol feed, maintained the level that it had at the  
 beginning of the experiment. Weights of extirpated liver and epididymal fat  
 pads were significantly less than those in the basic feed group. CONCLUSION:  
 Our data suggest that **maitake** mushrooms have the ability to alter  
 lipid metabolism by inhibiting both the accumulation of liver lipids and the  
 elevation of serum lipids. Further studies are needed to elucidate the

mechanism of activity of **maitake** mushrooms and to establish whether their action in humans is similar to that in the animal model tested here.

CONTROLLED TERM: Check Tags: Male  
 Animals  
 \*Basidiomycota  
 Comparative Study  
 \*Complementary Therapies  
 Lipids: BL, blood  
 Rats  
 Rats, Sprague-Dawley  
 CHEMICAL NAME: 0 (Lipids)

L173 ANSWER 68 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 96154438 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 8593430  
 TITLE: Structure-activity relationship of (1-->3)-beta-D-glucans in the induction of cytokine production from macrophages, in vitro.  
 AUTHOR: Okazaki M; Adachi Y; Ohno N; Yadomae T  
 CORPORATE SOURCE: Laboratory of Immunopharmacology of Microbial Products School of Pharmacy, Tokyo University of Pharmacy and Life Science, Japan.  
 SOURCE: Biological & pharmaceutical bulletin, (1995 Oct) Vol. 18, No. 10, pp. 1320-7.  
 Journal code: 9311984. ISSN: 0918-6158.  
 PUB. COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199604  
 ENTRY DATE: Entered STN: 22 Apr 1996  
 Last Updated on STN: 22 Apr 1996  
 Entered Medline: 8 Apr 1996

ABSTRACT:

In a previous study, we reported that one of the gel-forming (1-->3)-beta-D-glucans, grifolan (from *Grifola frondosa*, GRN), stimulated cytokine production from macrophages in vitro. However, several other gel-forming (1-->3)-beta-D-glucans, such as sonifilan (SPG) and SSG, did not induce cytokine production from macrophages. The ultrastructure of gel-forming (1-->3)-beta-D-glucans, especially the triple- and single-helix, does not affect the cytokine-inducing activity. The action on tumor necrosis factor alpha (TNF alpha) release was correlated with the **molecular \*\*\*weight\*\*\*** of GRN, since the highest **molecular weight** fraction of GRN, Mr > or = 45000, exhibited the strongest activity. Although, native SSG (Mr > or = 2000000) did not induce cytokine production, chemical modification involving debranching of the side chain glucosyl residues of SSG resulted in TNF alpha inducing activity. These results suggest that the branching **ratio** and **molecular weight** of (1-->3)-beta-D-glucans are important factors for the production of cytokines from macrophages. GRN-inducible TNF alpha release was reduced by co-culturing with SPG, SSG, or the soluble beta-glucan, laminarin (LAM). Pretreatment alone with SPG or LAM was not sufficient for significant inhibition of GRN-inducible TNF alpha release. TNF alpha production induced with 50 micrograms/ml of zymosan (ZyM) was also reduced by addition of SPG, but TNF alpha production, stimulated with a higher concentration (100 micrograms/ml) of ZyM or with lipopolysaccharide (LPS), was not reduced significantly. The inhibitory effect of LAM on the uptake of GRN by RAW264.7 cells was not completely correlated with TNF alpha release. These results suggest that macrophages may incorporate beta-glucans through certain (1-->3)-beta-D-glucan-specific mechanisms and/or other endocytosis pathways, and that the beta-glucan-specific route is

partially associated with cytokine production. In conclusion, TNF alpha release by macrophages is induced only by beta-glucans with high \*\*\*molecular\*\*\* weights and lower branching ratios, and the mechanism for the recognition of beta-glucans is multiple and assumed to be divided into several parts involving various cellular functions.

CONTROLLED TERM: Adjuvants, Immunologic: CH, chemistry  
 \*Adjuvants, Immunologic: PD, pharmacology  
 Animals  
 Cell Line  
 \*Cytokines: BI, biosynthesis  
 Endocytosis: DE, drug effects  
 Enzyme-Linked Immunosorbent Assay  
 Glucans: CH, chemistry  
 \*Glucans: PD, pharmacology  
 In Vitro  
 Interleukin-6: BI, biosynthesis  
 Lipopolysaccharides: PD, pharmacology  
 Macrophages: DE, drug effects  
 \*Macrophages: IM, immunology  
 Mice  
 Molecular Weight  
 Oxidation-Reduction  
 Structure-Activity Relationship  
 Tumor Necrosis Factor-alpha: BI, biosynthesis  
 Zymosan: PD, pharmacology  
 \*beta-Glucans

CAS REGISTRY NO.: 104074-36-4 (grifolan); 9010-72-4 (Zymosan)  
 CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Cytokines); 0 (Glucans); 0 (Interleukin-6); 0 (Lipopolysaccharides); 0 (Tumor Necrosis Factor-alpha); 0 (beta-Glucans)

L173 ANSWER 69 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 96318516 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 8749321  
 TITLE: Characterization of a thermostable lysine-specific metalloendopeptidase from the fruiting bodies of a basidiomycete, *Grifola frondosa*.  
 AUTHOR: Nonaka T; Ishikawa H; Tsumuraya Y; Hashimoto Y; Dohmae N  
 CORPORATE SOURCE: Department of Biochemistry, Saitama University.  
 SOURCE: Journal of biochemistry, (1995 Nov) Vol. 118, No. 5, pp. 1014-20.  
 Journal code: 0376600. ISSN: 0021-924X.  
 PUB. COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199701  
 ENTRY DATE: Entered STN: 19 Feb 1997  
 Last Updated on STN: 3 Mar 2000  
 Entered Medline: 21 Jan 1997

## ABSTRACT:

A zinc-metalloendopeptidase, MEP, capable of catalyzing specific cleavage of acyl-lysine bonds (-X-Lys-) in polypeptides has been purified 212-fold in a yield of 24.7% from the fruiting bodies of *Grifola frondosa*, which is a popular edible mushroom called "MAITA-KE" in Japan. The purified enzyme consists of a single polypeptide chain with an apparent molecular mass of 20 kDa and a pI value of 7.46, contains 1 atom of zinc/molecule and can be inactivated with EDTA or 1,10-phenanthroline. Treatment of MEP with EDTA affords an apoenzyme, whose activity can be fully restored by the addition of Mn2+, Zn2+, Ca2+, or Co2+. Prominent features of MEP are its remarkable heat

stability and its high affinity for beta-D-glucans and chitin. It hydrolyzes proteins maximally at pH 9-10, liberating only lysylpeptides. Polylysine and lysine copolymers with alanine, phenylalanine, or glutamic acid can serve as good substrates. Lysylalanine was liberated from bovine insulin and its oxidized B chain by the action of MEP. Mass spectrometric analysis by Frit-FAB MS of the fragments generated from horse heart cytochrome c presented unambiguous evidence to corroborate the specificity of MEP for acyl-lysine bonds.

CONTROLLED TERM: Amino Acid Sequence  
 \*Basidiomycota: EN, enzymology  
 Basidiomycota: UL, ultrastructure  
 Chitin: CH, chemistry  
 Enzyme Stability  
 \*Heat  
 Hydrogen-Ion Concentration  
 \*Lysine: CH, chemistry  
 Metalloendopeptidases: DE, drug effects  
 \*Metalloendopeptidases: IP, isolation & purification  
 Metals: PD, pharmacology  
 Molecular Sequence Data  
 Molecular Weight  
 \*Proteoglycans: CH, chemistry  
 Substrate Specificity  
 CAS REGISTRY NO.: 1398-61-4 (Chitin); 56-87-1 (Lysine)  
 CHEMICAL NAME: 0 (Metals); 0 (Proteoglycans); EC 3.4.24  
 (Metalloendopeptidases)

L173 ANSWER 70 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 95253138 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 7735226  
 TITLE: Enhancement of LPS triggered TNF-alpha (tumor necrosis factor-alpha) production by (1-->3)-beta-D-glucans in mice.  
 AUTHOR: Ohno N; Asada N; Adachi Y; Yadomae T  
 CORPORATE SOURCE: Tokyo College of Pharmacy, Japan.  
 SOURCE: Biological & pharmaceutical bulletin, (1995 Jan) Vol. 18, No. 1, pp. 126-33.  
 Journal code: 9311984. ISSN: 0918-6158.  
 PUB. COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199506  
 ENTRY DATE: Entered STN: 15 Jun 1995  
 Last Updated on STN: 3 Feb 1997  
 Entered Medline: 7 Jun 1995

ABSTRACT:  
 Effects of (1-->3)-beta-D-glucans on tumor necrosis factor-alpha (TNF-alpha) production in mice in vivo were investigated with or without triggering stimulation of lipopolysaccharide (LPS). Administration of grifolan (GRN) (100-250 micrograms/mouse) obtained from *Grifola frondosa*, did not elevate the TNF-alpha concentration in serum, but significantly elevated LPS (10 micrograms/mouse)-elicited TNF-alpha production in serum. The priming effect was observed as early as 2 h after administration and remained high for 3 weeks. The priming effect was dependent on the strain of mice, i.e. ICR, BALB/c, and MRL/lpr (15 weeks old) showed high response. In addition, GRN administration increased membrane-bound TNF-alpha assessed by Western blotting and flow cytometry. Comparing the activity using structurally related glucans obtained from other microorganisms, highly branched glucans, SSG isolated from *Sclerotinia sclerotiorum* IFO 9395 and OL-2 from *Omphalia lapidescentiae* significantly increased TNF-alpha production. Small molecular

\*\*\*weight\*\*\* GRN derivatives prepared by heat degradation method showed weaker priming effect. These facts suggested that the glucans showed priming effect of TNF-alpha production in vivo and that this effect was related to the degree of branching and **molecular weight**.

CONTROLLED TERM: Animals  
 Base Sequence  
 \*Biological Response Modifiers: PD, pharmacology  
 Blotting, Western  
 Cells, Cultured  
 Enzyme-Linked Immunosorbent Assay  
 Flow Cytometry  
 \*Glucans: PD, pharmacology  
 Kinetics  
 \*Lipopolysaccharides: PD, pharmacology  
 Liver: DE, drug effects  
 Liver: ME, metabolism  
 Macrophages: ME, metabolism  
 Mice  
 Mice, Inbred BALB C  
 Mice, Inbred ICR  
 Molecular Sequence Data  
 Spleen: DE, drug effects  
 Spleen: ME, metabolism  
 Structure-Activity Relationship  
 \*Tumor Necrosis Factor-alpha: BI, biosynthesis  
 \*beta-Glucans  
 CAS REGISTRY NO.: 9051-97-2 (beta-1,3-glucan)  
 CHEMICAL NAME: 0 (Biological Response Modifiers); 0 (Glucans); 0  
 (Lipopolysaccharides); 0 (Tumor Necrosis Factor-alpha); 0  
 (beta-Glucans)

L173 ANSWER 71 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 95253105 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 7537572  
 TITLE: Enhancement of cytokine production by macrophages  
 stimulated with (1-->3)-beta-D-glucan, grifolan (GRN),  
 isolated from **Grifola frondosa**.  
 AUTHOR: Adachi Y; Okazaki M; Ohno N; Yadomae T  
 CORPORATE SOURCE: Laboratory of Immunopharmacology of Microbial Products,  
 Tokyo University of Pharmacy and Life Science, Japan.  
 SOURCE: Biological & pharmaceutical bulletin, (1994 Dec) Vol. 17,  
 No. 12, pp. 1554-60.  
 Journal code: 9311984. ISSN: 0918-6158.  
 PUB. COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199506  
 ENTRY DATE: Entered STN: 15 Jun 1995  
 Last Updated on STN: 29 Jan 1996  
 Entered Medline: 8 Jun 1995

# ABSTRACT:

The ability of grifolan (GRN), a purified fungal (1-->3)-beta-D-glucan, to induce various cytokines from macrophages was examined in vitro. Interleukin-6 (IL-6) activity in supernatants from the culture of macrophage cell line, RAW264.7 was dependent on increasing doses of GRN. The level of IL-6 induced with 500 micrograms/ml of GRN was comparable to that induced with lipopolysaccharide (LPS) 10 micrograms/ml. Enhancement of the mRNA level of IL-6 by treatment with GRN was detected by reverse transcriptase-polymerase chain reaction (RT-PCR). The effect of GRN on production of IL-6 was also

observed using peritoneal macrophages from C3H/HeJ mice which did not respond to endotoxins. This data suggested that the ability of GRN to activate IL-6 production of macrophages is not due to contamination of endotoxins in the preparation. Enhanced production of cytokine by GRN was observed not only with IL-6, but also with interleukin-1 (IL-1) and tumor necrosis factor alpha (TNF alpha). In the production of TNF alpha, GRN was more effective than LPS used in this study. Other soluble or gel-forming(1-->3)-beta-D-glucans from various sources did not enhance the production of such cytokines although they are structurally similar to GRN. The above results indicate that GRN is a novel macrophage activator which augments cytokine production without dependence on endotoxins.

CONTROLLED TERM: Adjuvants, Immunologic: IP, isolation & purification  
 \*Adjuvants, Immunologic: PD, pharmacology  
 Animals  
 Base Sequence  
 \*Cytokines: BI, biosynthesis  
 Glucans: IP, isolation & purification  
 Glucans: PD, pharmacology  
 In Vitro  
 Interleukin-1: BI, biosynthesis  
 Interleukin-6: BI, biosynthesis  
 Lipopolysaccharides: PD, pharmacology  
 Macrophages, Peritoneal: DE, drug effects  
 \*Macrophages, Peritoneal: ME, metabolism  
 Mice  
 Mice, Inbred C3H  
 Molecular Sequence Data  
 \*Plants, Medicinal: CH, chemistry  
 Polymerase Chain Reaction  
 RNA-Directed DNA Polymerase  
 T-Lymphocytes: DE, drug effects  
 Tumor Necrosis Factor-alpha: BI, biosynthesis  
 \*beta-Glucans  
 CAS REGISTRY NO.: 104074-36-4 (grifolan)  
 CHEMICAL NAME: 0 (Adjuvants, Immunologic); 0 (Cytokines); 0 (Glucans); 0 (Interleukin-1); 0 (Interleukin-6); 0 (Lipopolysaccharides); 0 (Tumor Necrosis Factor-alpha); 0 (beta-Glucans); EC 2.7.7.49 (RNA-Directed DNA Polymerase)

L173 ANSWER 72 OF 99 MEDLINE on STN  
 ACCESSION NUMBER: 95119980 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 7820117  
 TITLE: Anti-diabetic activity present in the fruit body of *Grifola frondosa* (Maitake). I.  
 AUTHOR: Kubo K; Aoki H; Nanba H  
 CORPORATE SOURCE: Yukiguni Maitake Co., Ltd. Niigata, Japan.  
 SOURCE: Biological & pharmaceutical bulletin, (1994 Aug) Vol. 17, No. 8, pp. 1106-10.  
 Journal code: 9311984. ISSN: 0918-6158.  
 PUB. COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199502  
 ENTRY DATE: Entered STN: 23 Feb 1995  
 Last Updated on STN: 23 Feb 1995  
 Entered Medline: 10 Feb 1995

ABSTRACT:  
 The fruit body of *Grifola frondosa* (maitake), Basidiomycetes was confirmed to contain substances with anti-diabetic

activity. When 1 g/d of powdered fruit body of **maitake** was given orally to a genetically **diabetic** mouse (KK-Ay), blood glucose reduction was observed, in contrast to the control group in which the blood glucose increased with ageing. Moreover, levels of insulin and triglyceride in plasma demonstrated a change similar to blood glucose with feeding of **\*\*\*maitake.\*\*\*** Ether-ethanol-soluble (ES) and hot water-soluble (WS) fractions were prepared from the fruit body and their hypoglycemic activity was examined. Blood glucose-lowering activity was found when ES-fraction or WS-50% ethanol float (X) fraction was administered orally, but other WS-fractions were inactive. These results suggest that the anti-**diabetic** activity was present not only in the ES-fraction consisting of lipid but also in the X-fraction of peptidoglycan (sugar:protein = 65:35).

CONTROLLED TERM: Check Tags: Female

Animals

\*Blood Glucose: ME, metabolism

**Diabetes Mellitus, Type 2: DT, drug therapy**

**Diabetes Mellitus, Type 2: GE, genetics**

\*Hypoglycemic Agents: PD, pharmacology

Insulin: BL, blood

Mice

Mice, Inbred Strains

**Peptidoglycan: ME, metabolism**

\*Polyporaceae: CH, chemistry

Triglycerides: BL, blood

CAS REGISTRY NO.: 11061-68-0 (Insulin)

CHEMICAL NAME: 0 (Blood Glucose); 0 (Hypoglycemic Agents); 0 (Peptidoglycan); 0 (Triglycerides)

L173 ANSWER 73 OF 99

MEDLINE on STN

ACCESSION NUMBER: 89293375 MEDLINE

DOCUMENT NUMBER: PubMed ID: 2738717

TITLE: Dietary mushrooms reduce **blood pressure** in spontaneously **hypertensive** rats (SHR).

AUTHOR: Kabir Y; Kimura S

CORPORATE SOURCE: Department of Food Chemistry, Faculty of Agriculture, Tohoku University, Sendai, Japan.

SOURCE: Journal of nutritional science and vitaminology, (1989 Feb) Vol. 35, No. 1, pp. 91-4. Journal code: 0402640. ISSN: 0301-4800.

PUB. COUNTRY: Japan

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 198908

ENTRY DATE: Entered STN: 9 Mar 1990

Last Updated on STN: 29 Jan 1999

Entered Medline: 3 Aug 1989

ABSTRACT:

The **blood pressure** of spontaneously **hypertensive** rats (SHR) were significantly reduced by **Maitake** feeding for 8 weeks period beginning at a time when the animals were 10 weeks of age with well-established high **blood pressure**. There was no difference in the plasma total and free cholesterol, triglyceride and phospholipid levels between the **Maitake** fed animals and the control. On the other hand, Shiitake mushroom did not reduce the **blood \*\*\*pressure\*\*\***, but significantly lower the plasma free cholesterol, triglyceride and phospholipid in compared with the control. The results suggest that dietary **Maitake** mushroom reduce the **blood \*\*\*pressure\*\*\***.

CONTROLLED TERM: Check Tags: Male

Animals  
\*Basidiomycota  
  \*Blood Pressure: DE, drug effects  
  Body Weight: DE, drug effects  
  Cholesterol: BL, blood  
\*Diet  
  Organ Size: DE, drug effects  
  Phospholipids: BL, blood  
  Rats  
  Rats, Inbred SHR  
  Triglycerides: BL, blood  
CAS REGISTRY NO.: 57-88-5 (Cholesterol)  
CHEMICAL NAME: 0 (Phospholipids); 0 (Triglycerides)

L173 ANSWER 74 OF 99 MEDLINE on STN  
ACCESSION NUMBER: 88311245 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 3409391  
TITLE: **Blood pressure**-lowering activity  
present in the fruit body of **Grifola frondosa** (**maitake**). I.  
AUTHOR: Adachi K; Nanba H; Otsuka M; Kuroda H  
SOURCE: Chemical & pharmaceutical bulletin, (1988 Mar) Vol. 36, No. 3, pp. 1000-6.  
Journal code: 0377775. ISSN: 0009-2363.  
PUB. COUNTRY: Japan  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 198810  
ENTRY DATE: Entered STN: 8 Mar 1990  
Last Updated on STN: 29 Jan 1999  
Entered Medline: 11 Oct 1988  
CONTROLLED TERM: Check Tags: Male  
Animals  
  \*Antihypertensive Agents  
\*Basidiomycota: AN, analysis  
  Blood Pressure: DE, drug effects  
  Japan  
  Rats  
  Rats, Inbred SHR  
CHEMICAL NAME: 0 (**Antihypertensive** Agents)

L173 ANSWER 75 OF 99 MEDLINE on STN  
ACCESSION NUMBER: 88171777 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 3443885  
TITLE: Effect of shiitake (*Lentinus edodes*) and **maitake** (*Grifola frondosa*) mushrooms on **blood pressure** and plasma lipids of spontaneously **hypertensive** rats.  
AUTHOR: Kabir Y; Yamaguchi M; Kimura S  
CORPORATE SOURCE: Department of Food Chemistry, Faculty of Agriculture, Tohoku University, Sendai, Japan.  
SOURCE: Journal of nutritional science and vitaminology, (1987 Oct) Vol. 33, No. 5, pp. 341-6.  
Journal code: 0402640. ISSN: 0301-4800.  
PUB. COUNTRY: Japan  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 198804

ENTRY DATE: Entered STN: 8 Mar 1990  
Last Updated on STN: 29 Jan 1999  
Entered Medline: 27 Apr 1988

## ABSTRACT:

To study the effect of Shiitake (*Lentinus edodes*) and **Maitake** (**\*\*\*Grifola\*\*\* frondosa**) on **hypertension**, spontaneously **\*\*\*hypertensive\*\*\*** rats (SHR) were fed a diet containing 5% mushroom powder and 0.5% NaCl solution as drinking water for 9 weeks. The dietary mushrooms decreased the **blood pressure**. The plasma free cholesterol level decreased in Shiitake-fed animals, whereas in **Maitake**-fed animals the total cholesterol level decreased. There was no difference in the plasma triglyceride and phospholipid levels among the experimental groups. Shiitake feeding resulted in a decrease in VLDL- and HDL-cholesterol whereas **\*\*\*Maitake\*\*\*** feeding caused a decrease in VLDL-cholesterol only. Plasma LDL-cholesterol was not affected by dietary mushrooms. The results suggest that dietary mushrooms prevent **blood pressure** increase in **\*\*\*hypertension\*\*\***.

CONTROLLED TERM: Check Tags: Male  
Animals  
\*Basidiomycota: AN, analysis  
\*Blood Pressure: DE, drug effects  
Growth  
Hypertension: BL, blood  
\*Hypertension: PP, physiopathology  
\*Lipids: BL, blood  
Rats  
Rats, Inbred SHR  
CHEMICAL NAME: 0 (Lipids)

L173 ANSWER 76 OF 99 MEDLINE on STN  
ACCESSION NUMBER: 79167809 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 108021  
TITLE: [Isolated rat hepatocytes. Simultaneous study of variations in sialic acid content of glycoconjugated membranes and asialotransferrin uptake].  
Hepatocytes isolés de rat. Etude simultanée des variations de la teneur en acide sialique de glycoconjugués membranaires et de la captation de l'asialotransferrine.  
AUTHOR: Durand G; Dumont J P; Appel M; Durand D; Davy J; Feger J; Agneray J  
SOURCE: Comptes rendus des séances de l'Académie des sciences. Serie D, Sciences naturelles, (1979 Feb 5) Vol. 288, No. 5, pp. 523-6.  
Journal code: 8108552. ISSN: 0567-655X.  
PUB. COUNTRY: France  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: French  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 197907  
ENTRY DATE: Entered STN: 15 Mar 1990  
Last Updated on STN: 15 Mar 1990  
Entered Medline: 25 Jul 1979

## ABSTRACT:

Hepatocytes isolated from streptozotocin treated Rats bind less asialotransferrin than hepatocytes isolated from normal rats. This decrease is parallel with a decrease in the sialic acid content. Insulin therapy restored simultaneously membrane sialic acid content and asialotransferrin binding capacity.

CONTROLLED TERM: Check Tags: Male  
Animals

Blood Glucose: ME, metabolism  
 Diabetes Mellitus, Experimental: DT, drug therapy  
 \*Diabetes Mellitus, Experimental: ME, metabolism  
 English Abstract  
 Glycoproteins: PD, pharmacology  
 Insulin: BL, blood  
 Insulin: TU, therapeutic use  
 Liver: CY, cytology  
 \*Liver: ME, metabolism  
 Membranes: ME, metabolism  
 Protein Binding  
 Rats  
 \*Sialic Acids: ME, metabolism  
 \*Transferrin: AA, analogs & derivatives  
 Transferrin: ME, metabolism

CAS REGISTRY NO.: 11061-68-0 (Insulin); 11096-37-0 (Transferrin)  
 CHEMICAL NAME: 0 (Blood Glucose); 0 (Glycoproteins); 0 (Sialic Acids)

L173 ANSWER 77 OF 99 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2006091584 EMBASE

TITLE: [Treatment of patients with diabetes mellitus type 2 and coronary artery disease].  
 BEHANDELING VAN PATIENTEN MET DIABETES MELLITUS TYPE 2 EN TEVENS CORONAIRE HARTZIEKTEN.

AUTHOR: Wiersma J.J.; Trip M.D.; Piek J.J.

CORPORATE SOURCE: J.J. Wiersma, Academisch Medisch Centrum, Universiteit van Amsterdam, Afd. Cardiologie, Meibergdreef 9, 1105 AZ Amsterdam, Netherlands. j.j.wiersma@amc.uva.nl

SOURCE: Nederlands Tijdschrift voor Geneeskunde, (18 Feb 2006) Vol. 150, No. 7, pp. 361-366. .  
 Refs: 39

ISSN: 0028-2162 CODEN: NETJAN

COUNTRY: Netherlands

DOCUMENT TYPE: Journal; General Review

FILE SEGMENT: 003 Endocrinology  
 018 Cardiovascular Diseases and Cardiovascular Surgery  
 037 Drug Literature Index

LANGUAGE: Dutch

SUMMARY LANGUAGE: English; Dutch

ENTRY DATE: Entered STN: 10 Mar 2006

Last Updated on STN: 10 Mar 2006

ABSTRACT: Of all patients presenting with coronary artery disease, 20-30% already have a diagnosis of diabetes mellitus type 2. Of the remaining patients, another 15-20% are found at presentation to have diabetes mellitus and 30% have glucose intolerance. Both conditions are major risk factors for the recurrence of coronary artery disease and mortality. The treatment of patients with diabetes mellitus type 2 always includes improvement in lifestyle, adequate blood-glucose control, cholesterol-lowering therapy and blood-pressure control. Furthermore, if one or more other traditional cardiovascular risk factors are present, or if the patient is over 40 years of age, acetylsalicylic acid must be added. Finally, with a prior history of coronary-artery disease, patients must be given an angiotensin converting enzyme (ACE) inhibitor. During percutaneous coronary interventions, patients with diabetes mellitus type 2 are preferably treated with a drug-eluting stent in combination with clopidogrel, and in case of an acute coronary syndrome, glycoprotein (GP) IIb/IIIa receptor antagonists are added to the standard treatment.

CONTROLLED TERM: Medical Descriptors:

**\*non insulin dependent diabetes mellitus: DT, drug therapy**

\*coronary artery disease: DT, drug therapy  
glucose intolerance  
mortality  
quality of life  
blood glucose monitoring  
blood pressure regulation  
cardiovascular risk  
drug eluting stent  
human  
review

CONTROLLED TERM: Drug Descriptors:

\*hypocholesterolemic agent: DT, drug therapy  
\*acetylsalicylic acid: DT, drug therapy  
\*dipeptidyl carboxypeptidase inhibitor: DT, drug therapy  
\*clopidogrel: CB, drug combination  
\*clopidogrel: DT, drug therapy  
\*glycoprotein IIb: CB, drug combination  
**\*glycoprotein IIb: DT, drug therapy**  
\*betal integrin: CB, drug combination  
\*betal integrin: DT, drug therapy

CAS REGISTRY NO.: (acetylsalicylic acid) 493-53-8, 50-78-2, 53663-74-4,  
53664-49-6, 63781-77-1; (clopidogrel) 113665-84-2,  
120202-66-6, 90055-48-4, 94188-84-8

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ACCESSION NUMBER: 2006041658 EMBASE

TITLE: Botanical polysaccharides: Macrophage immunomodulation and therapeutic potential.

AUTHOR: Schepetkin I.A.; Quinn M.T.

CORPORATE SOURCE: M.T. Quinn, Department of Veterinary Molecular Biology, Montana State University, Bozeman, MT 59717, United States. mquinn@montana.edu

SOURCE: International Immunopharmacology, (2006) Vol. 6, No. 3, pp. 317-333. .

Refs: 184

ISSN: 1567-5769 CODEN: IINMBA

PUBLISHER IDENT.: S 1567-5769(05)00286-9

COUNTRY: Netherlands

DOCUMENT TYPE: Journal; General Review

FILE SEGMENT: 026 Immunology, Serology and Transplantation  
030 Pharmacology  
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 3 Mar 2006

Last Updated on STN: 3 Mar 2006

ABSTRACT: Botanical polysaccharides exhibit a number of beneficial therapeutic properties, and it is thought that the mechanisms involved in these effects are due to the modulation of innate immunity and, more specifically, macrophage function. In this review, we summarize our current state of understanding of the macrophage modulatory effects of botanical polysaccharides isolated from a wide array of different species of flora, including higher plants, mushrooms, lichens and algae. Overall, the primary effect of botanical polysaccharides is to enhance and/or activate macrophage immune responses, leading to immunomodulation, anti-tumor activity, wound-healing and other therapeutic effects. Furthermore, botanical and microbial polysaccharides bind to common surface receptors and induce similar immunomodulatory responses in macrophages,

suggesting that evolutionarily conserved polysaccharide structural features are shared between these organisms. Thus, the evaluation of botanical polysaccharides provides a unique opportunity for the discovery of novel therapeutic agents and adjuvants that exhibit beneficial immunomodulatory properties. .COPYRGHT. 2005 Elsevier B.V. All rights reserved.

CONTROLLED TERM: Medical Descriptors:  
 macrophage  
 higher plant  
 mushroom  
 lichen  
 alga  
 immune response  
 antineoplastic activity  
 immunomodulation  
 drug mechanism  
 host resistance  
 drug effect  
 drug binding  
 human  
 nonhuman  
 review  
 priority journal  
 Drug Descriptors:  
 \*polysaccharide: IP, intraperitoneal drug administration  
 \*polysaccharide: PO, oral drug administration  
 \*polysaccharide: PD, pharmacology  
 acemannan: PD, pharmacology  
 krestin: PD, pharmacology  
**proteoglycan: PD, pharmacology**  
 glycosaminoglycan: PD, pharmacology  
 arabinogalactan: PO, oral drug administration  
 arabinogalactan: PD, pharmacology  
 beta glucan: PD, pharmacology  
**grifolan: PD, pharmacology**  
 lentinan: PD, pharmacology  
 galactomannan: PD, pharmacology  
 schizophyllan: PD, pharmacology  
 scleroglucan: PD, pharmacology  
 fucoidin: PD, pharmacology  
 Astragalus extract: PD, pharmacology  
 aleoride: PD, pharmacology  
 angelan: PD, pharmacology  
 acid polysaccharide: PD, pharmacology  
 celosian: PD, pharmacology  
 panaxane: PD, pharmacology  
 pectic polysaccharide: PD, pharmacology  
 callus acidic arabinogalactan: PD, pharmacology  
 heteromannan: PD, pharmacology  
 alpha glucan: IP, intraperitoneal drug administration  
 alpha glucan: PD, pharmacology  
 acidic heteroglycan: PD, pharmacology  
 polysaccharopeptide: PO, oral drug administration  
 polysaccharopeptide: PD, pharmacology  
 fucogalactan: PD, pharmacology  
 immunon: PD, pharmacology  
 unindexed drug  
 xyloglucan: PO, oral drug administration  
 xyloglucan: PD, pharmacology  
 unclassified drug

CAS REGISTRY NO.: (acemannan) 110865-83-3; (krestin) 66455-27-4;  
 (arabinogalactan) 9036-66-2; (**grifolan**)  
 104074-36-4; (lentinan) 37339-90-5; (galactomannan)  
 11078-30-1; (schizophyllan) 9050-67-3; (scleroglucan)  
 39464-87-4; (fucoidin) 9072-19-9

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ACCESSION NUMBER: 2006023395 EMBASE  
 TITLE: MDR1 gene polymorphisms and risk of gingival hyperplasia induced by calcium antagonists.  
 AUTHOR: Meisel P.; Giebel J.; Kunert-Keil C.; Dazert P.; Kroemer H.K.; Kocher T.  
 CORPORATE SOURCE: Dr. P. Meisel, Department of Pharmacology, University of Greifswald, Friedrich-Loeffler-Strasse 23d, D-17487 Greifswald, Germany. meiselp@uni-greifswald.de  
 SOURCE: Clinical Pharmacology and Therapeutics, (2006) Vol. 79, No. 1, pp. 62-71. .  
 Refs: 49  
 ISSN: 0009-9236 CODEN: CLPTAT  
 PUBLISHER IDENT.: S 0009-9236(05)00416-9  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 011 Otorhinolaryngology  
 022 Human Genetics  
 037 Drug Literature Index  
 038 Adverse Reactions Titles  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English  
 ENTRY DATE: Entered STN: 2 Feb 2006  
 Last Updated on STN: 2 Feb 2006

ABSTRACT: Background: Gingival overgrowth is a common side effect of calcium antagonists. Although the pathogenesis is unknown, several lines of evidence point to a modulation of inflammatory processes. Because the calcium antagonists, albeit to a variable degree, act as inhibitors of P-glycoprotein (P-gp), the gene product of multidrug resistance 1 (MDR1), and inflammation may modify P-gp expression, we analyzed the MDR1 polymorphisms as risk factors for gingival overgrowth induced by calcium antagonists. Methods: Clinical, laboratory, and anamnestic data including periodontal parameters and use of calcium antagonists were assessed in a cross-sectional epidemiologic investigation (N = 1484). MDR1 polymorphisms in exon 21 G2677T/A and exon 26 C3435T were determined. P-gp expression was detected in gingival tissues. In a matched-pair analysis, 93 subjects using calcium antagonists and 186 not using them were compared. Results: P-gp is expressed in the endothelial layers of blood vessels obtained from healthy or inflamed gingiva. Subjects treated with calcium antagonists had significantly deeper gingival pockets than their drug-free counterparts (P < .0001). This drug-related side effect was associated with the MDR1 2677G/G or G/TA genotype (P < .001) but not with the variant genotype T/TA. This drug effect was proved by multiple regression analysis with adjustment for the risk factors of periodontitis (age, sex, smoking, and education) (P < .0001) and was associated with elevated C-reactive protein levels. The association of probing depth with the MDR1 polymorphism was confirmed in the matched-pair analysis (P < .0001). Conclusion: Treatment with calcium antagonists leads to gingival hyperplasia, which is associated with the MDR1 G2677T/A polymorphism. The MDR1 genotype may modify the inflammatory response to the drugs. Copyright .COPYRG. 2006 by the American Society for Clinical Pharmacology and Therapeutics.

CONTROLLED TERM: Medical Descriptors:  
 \*gingiva hyperplasia: SI, side effect

\*DNA polymorphism  
 risk factor  
 protein expression  
 genotype  
 periodontitis  
 multiple regression  
   **hypertension: DT, drug therapy**  
 cardiovascular disease: DT, drug therapy  
 statistical analysis  
 human  
 major clinical study  
 controlled study  
 adult  
 article  
 priority journal  
 Drug Descriptors:  
 \*calcium antagonist: AE, adverse drug reaction  
 \*calcium antagonist: DT, drug therapy  
 \*glycoprotein P inhibitor: AE, adverse drug reaction  
   **\*glycoprotein P inhibitor: DT, drug therapy**  
 glycoprotein P: EC, endogenous compound  
 gene product: EC, endogenous compound  
 multidrug resistance protein 1: EC, endogenous compound  
 nifedipine: AE, adverse drug reaction  
 nifedipine: DT, drug therapy  
 amlodipine: AE, adverse drug reaction  
 amlodipine: DT, drug therapy  
 nitrendipine: AE, adverse drug reaction  
 nitrendipine: DT, drug therapy  
 dihydropyridine: AE, adverse drug reaction  
 dihydropyridine: DT, drug therapy  
 verapamil: AE, adverse drug reaction  
 verapamil: DT, drug therapy  
 diltiazem: AE, adverse drug reaction  
 diltiazem: DT, drug therapy  
 CAS REGISTRY NO.: (nifedipine) 21829-25-4; (amlodipine) 88150-42-9;  
 (nitrendipine) 39562-70-4; (dihydropyridine) 27790-75-6;  
 (verapamil) 152-11-4, 52-53-9; (diltiazem) 33286-22-5,  
 42399-41-7

L173 ANSWER 80 OF 99 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN  
 ACCESSION NUMBER: 2005439453 EMBASE  
 TITLE: Production of exopolysaccharide from mycelial culture of *Grifola frondosa* and its inhibitory effect on matrix metalloproteinase-1 expression in UV-irradiated human dermal fibroblasts.  
 AUTHOR: Bae J.T.; Sim G.S.; Lee D.H.; Lee B.C.; Pyo H.B.; Choe T.B.; Yun J.W.  
 CORPORATE SOURCE: J.W. Yun, Department of Biotechnology, Daegu University, Kyungsan, Kyungbuk 712-714, Korea, Republic of.  
 jwyun@daegu.ac.kr  
 SOURCE: FEMS Microbiology Letters, (15 Oct 2005) Vol. 251, No. 2, pp. 347-354. .  
 Refs: 34  
 ISSN: 0378-1097 CODEN: FMLED7  
 PUBLISHER IDENT.: S 0378-1097(05)00572-0  
 COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 004 Microbiology

030 Pharmacology  
037 Drug Literature Index

LANGUAGE: English  
SUMMARY LANGUAGE: English  
ENTRY DATE: Entered STN: 27 Oct 2005  
Last Updated on STN: 27 Oct 2005

**ABSTRACT:** Exopolysaccharide (EPS) was prepared by submerged mycelial culture of a newly isolated mushroom *Grifola frondosa* HB0071 in a 5-l stirred-tank fermenter. This fungus produced a high concentration of biomass (24.8 g l<sup>-1</sup>) at day 4), thereby achieving high EPS concentration (7.2 g l<sup>-1</sup>) at day 4). EPS was proven to be a proteoglycan consisting of 85.6% carbohydrates (mostly glucose) and 7.3% proteins with a **molecular \*\*\*weight\*\*\*** of 1.0 x 10<sup>(6)</sup> Da. The photoprotective potential of EPS was tested in human dermal fibroblasts (HDF) exposed to ultraviolet-A (UVA) light. It was revealed that EPS had an inhibitory effect on human interstitial collagenase (matrix metalloproteinase, MMP-1) expression in UVA-irradiated HDF without any significant cytotoxicity. The treatment of UVA-irradiated HDF with EPS resulted in a dose-dependent decrease in the expression level of MMP-1 mRNA (by maximum 61.1% at an EPS concentration 250 µg ml<sup>-1</sup>). These results suggest that EPS obtained from mycelial culture of *G. frondosa* HB0071 may contribute to inhibitory action in photoaging skin by reducing the MMP 1-related matrix degradation system. .COPYRGT. 2005 Federation of European Microbiological Societies. Published by Elsevier B.V. All rights reserved.

**CONTROLLED TERM:** Medical Descriptors:

**\*grifola frondosa**  
\*mushroom  
\*mycelium  
\*fungus culture  
\*skin fibroblast  
\*ultraviolet A radiation  
\*radiation protection  
photoaging: PC, prevention  
protein expression  
fungus isolation  
bioreactor  
fungal biomass

**molecular weight**  
radiation exposure  
enzyme inhibition  
enzyme activity  
cytotoxicity  
dose response  
drug potency  
drug isolation  
human  
nonhuman  
controlled study  
human cell  
article  
priority journal

Drug Descriptors:

\*exopolysaccharide: DV, drug development  
\*exopolysaccharide: PD, pharmacology  
\*interstitial collagenase: EC, endogenous compound  
messenger RNA: EC, endogenous compound  
**proteoglycan**  
carbohydrate  
glucose  
protein

CAS REGISTRY NO.: (glucose) 50-99-7, 84778-64-3; (protein) 67254-75-5

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ACCESSION NUMBER: 2005281367 EMBASE

TITLE: [Stability of thermolabile pharmaceutical specialities under various temperature conditions [1]].

ESTABILIDAD DE LAS ESPECIALIDADES FARMACEUTICAS

TERMOLABILES EN DISTINTAS CONDICIONES DE TEMPERATURA.

AUTHOR: Sala Pinol F.; Juarez Gimenez J.C.; Tomas Guillen E.; Monterde Junyent J.

CORPORATE SOURCE: F. Sala Pinol, Servicio de Farmacia, Hospital Universitario Vall d'Hebron, Barcelona, Spain

SOURCE: Farmacia Hospitalaria, (2005) Vol. 29, No. 2, pp. 144-145.

Refs: 2

ISSN: 1130-6343 CODEN: FAHOE2

COUNTRY: Spain

DOCUMENT TYPE: Journal; Letter

FILE SEGMENT: 037 Drug Literature Index

039 Pharmacy

LANGUAGE: Spanish

ENTRY DATE: Entered STN: 14 Jul 2005

Last Updated on STN: 14 Jul 2005

CONTROLLED TERM: Medical Descriptors:

drug stability

temperature

drug information

drug industry

hospital pharmacy

letter

Drug Descriptors:

\*fibrin glue

\*alpha 1 antitrypsin

\*basiliximab

\*erythropoietin

\*blood clotting factor 7

\*fibrinogen

recombinant granulocyte colony stimulating factor

blood clotting factor 8 inhibitor

gemtuzumab ozogamicin

heme arginate

hyaluronic acid

digoxin antibody F(ab) fragment

hepatitis B antibody

complement component C1s inhibitor

tissucol duo

prolastina

epopen

recombinant erythropoietin

recombinant blood clotting factor 7a

haemocompletan

feiba immuno tim 4

glucagon gen novo

rhesuman

gamma anti hep b

viperfav

berinert

CAS REGISTRY NO.: (alpha 1 antitrypsin) 9041-92-3; (erythropoietin) 11096-26-7; (blood clotting factor 7) 9001-25-6;

(fibrinogen) 9001-32-5; (recombinant granulocyte colony stimulating factor) 121181-53-1; (heme arginate) 100438-92-4; (hyaluronic acid) 31799-91-4, 9004-61-9, 9067-32-7; (complement component C1s inhibitor) 80295-37-0, 80295-38-1; (recombinant erythropoietin) 113427-24-0, 122312-54-3, 130455-76-4

CHEMICAL NAME: (1) Tissucol duo; (2) Prolastina; (3) Simulect; (4) Epopen; (5) Eprex; (6) Novoseven; (7) Haemocompletan; (8) Granulokine; (9) Feiba immuno tim 4; (10) Mylotarg; (11) Glucagon gen novo; (12) Normosang; (13) Healon; (14) Rhesuman; (15) Digibind; (16) Gamma anti hep b; (17) Viperfav; (18) Berinert

COMPANY NAME: (2) Bayer; (3) Novartis; (5) Janssen Cilag; (8) Pensa; (9) Baxter; (10) Wyeth; (11) Novo Nordisk; (12) Orphan; (13) Pharmacia; (14) Berna Biotech; (15) Glaxo SmithKline; (16) Grifols; (17) Aventis Pasteur; (18) Aventis Behring

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ACCESSION NUMBER: 2004170296 EMBASE

TITLE: Immune modulation with high-dose heat-shock protein gp96: Therapy of murine autoimmune diabetes and encephalomyelitis.

AUTHOR: Chandawarkar R.Y.; Wagh M.S.; Kovalchin J.T.; Srivastava P.

CORPORATE SOURCE: P. Srivastava, Ctr. Immunother. Cancer/Infect. Dis., Univ. of Connecticut School of Med., Farmington, CT 06030-1601, United States. Srivastava@nso2.uchc.edu

SOURCE: International Immunology, (2004) Vol. 16, No. 4, pp. 615-624. .  
Refs: 37  
ISSN: 0953-8178 CODEN: INIMEN

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 026 Immunology, Serology and Transplantation  
030 Pharmacology  
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 29 Apr 2004  
Last Updated on STN: 29 Apr 2004

ABSTRACT: Immunization with heat-shock protein (HSP) gp96 elicits protective immunity to the cancer or virus-infected cells from which it is derived. Low doses of gp96 generate immunity, while doses 10 times the immunizing dose do not. We show here that injection of high doses of gp96 generates CD4(+) T cells that down-regulate a variety of ongoing immune responses. Immunization with high doses of gp96 prevents myelin basic protein- or proteolipid protein-induced autoimmune encephalomyelitis in SJL mice and the onset of diabetes in non-obese diabetic mice. The suppression of immune response can be adoptively transferred with CD4(+) cells and does not partition with the CD25 phenotype. The immunomodulatory properties of gp96 (and possibly other HSP) may be used for antigen-specific activation or suppression of cellular immune responses. The latter may form the basis for novel immunotherapies for autoimmune diseases. .COPYRGHT. 2004 The Japanese Society for Immunology.

CONTROLLED TERM: Medical Descriptors:  
\*immunomodulation  
\*diabetes mellitus: DT, drug therapy  
\*allergic encephalomyelitis: DT, drug therapy  
drug megadose

immunization  
 cellular immunity  
 helper cell  
 down regulation  
 immunoregulation  
 adoptive transfer  
 phenotype  
 antigen specificity  
 immunotherapy  
 nonhuman  
 female  
 mouse  
 animal experiment  
 animal model  
 controlled study  
 animal tissue  
 animal cell  
 article  
 priority journal

## Drug Descriptors:

\*glycoprotein gp 96: DO, drug dose  
 \*glycoprotein gp 96: DT, drug therapy  
 \*glycoprotein gp 96: PD, pharmacology  
 \*glycoprotein gp 96: SC, subcutaneous drug administration  
 heat shock protein: DO, drug dose  
 heat shock protein: DT, drug therapy  
 heat shock protein: PD, pharmacology  
 heat shock protein: SC, subcutaneous drug administration  
 CD4 antigen: EC, endogenous compound  
 myelin basic protein: TO, drug toxicity  
 proteolipid protein  
 interleukin 2 receptor: EC, endogenous compound

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ACCESSION NUMBER: 2004452524 EMBASE  
 TITLE: Gene therapy for autoimmune diseases.  
 AUTHOR: Furlan R.; Butti E.; Pluchino S.; Martino G.  
 CORPORATE SOURCE: R. Furlan, Neuroimmunology Unit, DIBIT, Dept. of Neurology/Neurophysiology, Via Olgettina 58, 20132 Milan, Italy. furlan.roberto@hsr.it  
 SOURCE: Current Opinion in Molecular Therapeutics, (2004) Vol. 6, No. 5, pp. 525-536. .  
 Refs: 159  
 ISSN: 1464-8431 CODEN: CUOTFO  
 COUNTRY: United Kingdom  
 DOCUMENT TYPE: Journal; General Review  
 FILE SEGMENT: 008 Neurology and Neurosurgery  
 022 Human Genetics  
 026 Immunology, Serology and Transplantation  
 031 Arthritis and Rheumatism  
 037 Drug Literature Index  
 039 Pharmacy  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English  
 ENTRY DATE: Entered STN: 12 Nov 2004  
 Last Updated on STN: 12 Nov 2004

ABSTRACT: Autoimmune diseases are threatening an increasing number of patients in developed countries, representing one of the major causes of disability and an enormous social cost. Current therapies mainly treat the symptoms of

autoimmune diseases and are only partially able to interfere with disease evolution, and therefore decrease the degree of physical impairment. Thus, the development of new therapeutic strategies is imperative. This review focuses on gene therapy, as one possible alternative approach to the treatment of autoimmune disorders. The potential of gene therapy to specifically target tissues affected by autoimmune aggression, and its ability to interfere with the destructive pathogenic process while providing functional replacement and fostering reparative mechanisms will be emphasized. Gene therapy studies in experimental models of diabetes, rheumatoid arthritis and multiple sclerosis are reviewed. .COPYRG. The Thomson Corporation.

CONTROLLED TERM: Medical Descriptors:

**\*diabetes mellitus: DT, drug therapy**

\*diabetes mellitus: PC, prevention

\*rheumatoid arthritis: DT, drug therapy

\*multiple sclerosis: DT, drug therapy

autoimmune disease: DT, drug therapy

autoimmune disease: PC, prevention

gene therapy

symptom

disease activity

physical disability

drug targeting

disease course

viral gene delivery system

nonviral gene delivery system

immunomodulation

Th1 cell

retrovirus vector

parvovirus vector

plasmid vector

Vaccinia virus

Herpes simplex virus 1

human

nonhuman

mouse

review

Drug Descriptors:

liposome

naked DNA

CD4 antigen: EC, endogenous compound

cytokine: EC, endogenous compound

interleukin 4: CB, drug combination

interleukin 4: DV, drug development

interleukin 4: DT, drug therapy

interleukin 4: PR, pharmaceuticals

interleukin 4: IM, intramuscular drug administration

interleukin 4: IP, intraperitoneal drug administration

interleukin 4: IV, intravenous drug administration

interleukin 10: CB, drug combination

interleukin 10: DV, drug development

interleukin 10: DT, drug therapy

interleukin 10: PR, pharmaceuticals

interleukin 10: IV, intravenous drug administration

interleukin 12: DV, drug development

interleukin 12: DT, drug therapy

interleukin 12: PR, pharmaceuticals

protein p40: DV, drug development

protein p40: DT, drug therapy

protein p40: PR, pharmaceuticals

transforming growth factor beta: DV, drug development  
transforming growth factor beta: DT, drug therapy  
transforming growth factor beta: PR, pharmaceuticals  
gamma interferon receptor: DV, drug development  
gamma interferon receptor: DT, drug therapy  
gamma interferon receptor: PR, pharmaceuticals  
alpha 1 antitrypsin: DV, drug development  
alpha 1 antitrypsin: DT, drug therapy  
alpha 1 antitrypsin: PR, pharmaceuticals  
alpha 1 antitrypsin: IM, intramuscular drug administration  
protein bcl 2: DV, drug development  
protein bcl 2: DT, drug therapy  
protein bcl 2: PR, pharmaceuticals  
glutamate decarboxylase: DV, drug development  
glutamate decarboxylase: DT, drug therapy  
glutamate decarboxylase: PR, pharmaceuticals  
beta interferon: DV, drug development  
beta interferon: DT, drug therapy  
beta interferon: PR, pharmaceuticals  
interleukin 1 receptor blocking agent: DV, drug development  
interleukin 1 receptor blocking agent: DT, drug therapy  
interleukin 1 receptor blocking agent: PR, pharmaceuticals  
interleukin 13: DV, drug development  
interleukin 13: DT, drug therapy  
interleukin 13: PR, pharmaceuticals  
I kappa B kinase: EC, endogenous compound  
phosphotransferase inhibitor: DV, drug development  
phosphotransferase inhibitor: DT, drug therapy  
phosphotransferase inhibitor: PR, pharmaceuticals  
tumor necrosis factor receptor: DV, drug development  
tumor necrosis factor receptor: DT, drug therapy  
tumor necrosis factor receptor: PR, pharmaceuticals  
cytotoxic T lymphocyte antigen 4: DV, drug development  
cytotoxic T lymphocyte antigen 4: DT, drug therapy  
cytotoxic T lymphocyte antigen 4: PR, pharmaceuticals  
gamma interferon: DV, drug development  
gamma interferon: DT, drug therapy  
gamma interferon: PR, pharmaceuticals  
interleukin 1beta: DV, drug development  
interleukin 1beta: DT, drug therapy  
interleukin 1beta: PR, pharmaceuticals  
interleukin 2: DV, drug development  
interleukin 2: DT, drug therapy  
interleukin 2: PR, pharmaceuticals  
interleukin 6: DV, drug development  
interleukin 6: DT, drug therapy  
interleukin 6: PR, pharmaceuticals  
gamma interferon inducible protein 10: DV, drug development  
gamma interferon inducible protein 10: DT, drug therapy  
gamma interferon inducible protein 10: PR, pharmaceuticals  
FAS ligand: DV, drug development  
FAS ligand: DT, drug therapy  
FAS ligand: PR, pharmaceuticals  
proteolipid protein: DV, drug development  
proteolipid protein: DT, drug therapy  
proteolipid protein: PR, pharmaceuticals  
myelin oligodendrocyte glycoprotein: DV, drug development  
**myelin oligodendrocyte glycoprotein: DT, drug therapy**  
myelin oligodendrocyte glycoprotein: PR, pharmaceuticals

myelin basic protein: DV, drug development  
 myelin basic protein: DT, drug therapy  
 myelin basic protein: PR, pharmaceuticals  
 unindexed drug

CAS REGISTRY NO.: (interleukin 12) 138415-13-1; (alpha 1 antitrypsin) 9041-92-3; (protein bcl 2) 219306-68-0; (glutamate decarboxylase) 9024-58-2; (interleukin 13) 148157-34-0; (I kappa B kinase) 209902-66-9; (tumor necrosis factor receptor) 129203-93-6, 184595-01-5; (gamma interferon) 82115-62-6; (interleukin 2) 85898-30-2; (gamma interferon inducible protein 10) 97741-20-3

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ACCESSION NUMBER: 2004471629 EMBASE

TITLE: Comparison of antibodies directed against human respiratory syncytial virus antigens present in two commercial preparations of human immunoglobulins with different neutralizing activities.

AUTHOR: Sastre P.; Melero J.A.; Garcia-Barreno B.; Palomo C.

CORPORATE SOURCE: jmelero@isciii.es

SOURCE: Vaccine, (9 Dec 2004) Vol. 23, No. 4, pp. 435-443. .

Refs: 40

ISSN: 0264-410X CODEN: VACCDE

PUBLISHER IDENT.: S 0264-410X(04)00492-X

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 004 Microbiology  
 026 Immunology, Serology and Transplantation  
 037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 29 Nov 2004

Last Updated on STN: 29 Nov 2004

ABSTRACT: Antibodies directed against human respiratory syncytial virus (HRSV) from two commercial preparations of human immunoglobulins (Igs) were compared. One of the Ig preparations (RespiGam) was obtained from blood samples selected for high titres of anti-HRSV neutralizing antibodies. The other preparation (Flebogamma) was obtained from unselected blood donations. RespiGam and Flebogamma had very similar anti-HRSV ELISA titres, but RespiGam neutralized virus infectivity 8-10 times more efficiently than Flebogamma. The same behaviour was observed when purified antibodies from RespiGam and Flebogamma, specific for either the fusion (F) or the attachment (G) **glycoprotein**, were compared. To gain further information about differences in neutralization between these two Ig preparations, antibodies recognizing certain F and G protein fragments or peptides were purified and their neutralizing activities were compared. In general, antibodies purified from RespiGam showed higher neutralizing activity than those purified from Flebogamma, but those differences were higher with antibodies specific for certain protein segments than for others. Some of the protein regions recognized by human neutralizing antibodies were mapped outside antigenic sites identified previously with panels of murine monoclonal antibodies. These results offer the possibility of searching for new neutralizing antibodies that could be used to study the molecular basis of neutralization and to prevent HRSV infections. .COPYRGT. 2004 Elsevier Ltd. All rights reserved.

CONTROLLED TERM: Medical Descriptors:

\*respiratory tract infection: ET, etiology

\*respiratory tract infection: PC, prevention

Respiratory syncytial pneumovirus

virus neutralization  
drug efficacy  
prophylaxis  
drug activity  
human  
controlled study  
human cell  
article  
priority journal  
Drug Descriptors:  
\*respiratory syncytial virus antibody: CM, drug comparison  
\*respiratory syncytial virus antibody: PD, pharmacology  
\*immunoglobulin: CM, drug comparison  
\*immunoglobulin: PD, pharmacology

CAS REGISTRY NO.: (immunoglobulin) 9007-83-4  
CHEMICAL NAME: (1) Respigam; (2) Flebogamma  
COMPANY NAME: (1) Medimmune (United States); (2) Grifols (Spain)

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ACCESSION NUMBER: 2004210464 EMBASE  
TITLE: Antiretrovirals, Part 1: Overview, History, and Focus on Protease Inhibitors.  
AUTHOR: Wynn G.H.; Zapor M.J.; Smith B.H.; Wortmann G.; Oesterheld J.R.; Armstrong S.C.; Cozza K.L.  
CORPORATE SOURCE: Dr. K.L. Cozza, Infectious Disease Service, Department of Medicine, Walter Reed Army Medical Center, 6900 Georgia Ave., Washington, DC 20307-5001, United States.  
kelly.cozza@na.amedd.army.mil  
SOURCE: Psychosomatics, (2004) Vol. 45, No. 3, pp. 262-270. .  
Refs: 68  
ISSN: 0033-3182 CODEN: PSYCBC  
COUNTRY: United States  
DOCUMENT TYPE: Journal; General Review  
FILE SEGMENT: 004 Microbiology  
030 Pharmacology  
032 Psychiatry  
037 Drug Literature Index  
038 Adverse Reactions Titles  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ENTRY DATE: Entered STN: 4 Jun 2004  
Last Updated on STN: 4 Jun 2004

ABSTRACT: This column is the first in a series on HIV/AIDS antiretroviral drugs. This first review summarizes the history of HIV/AIDS and the development of highly active antiretroviral therapy (HAART) and highlights why it is important for non-HIV specialists to know about these drugs. There are four broad classes of HIV medications used in varying combinations in HAART: the protease inhibitors, nucleoside analogue reverse transcriptase inhibitors, the non-nucleoside reverse transcriptase inhibitors, and cell membrane fusion inhibitors. This paper reviews the mechanism of action, side effects, toxicities, and drug interactions of the protease inhibitors.

CONTROLLED TERM: Medical Descriptors:  
\*acquired immune deficiency syndrome: DT, drug therapy  
\*Human immunodeficiency virus infection: DT, drug therapy  
\*highly active antiretroviral therapy  
virus infection: DT, drug therapy  
proteinase inhibition  
gastrointestinal symptom: SI, side effect

nausea: SI, side effect  
 vomiting: SI, side effect  
 diarrhea: SI, side effect  
 appetite disorder: SI, side effect  
 side effect: SI, side effect  
 rhabdomyolysis: SI, side effect  
 lipodystrophy: SI, side effect  
 lipodystrophy: SU, surgery  
 hyperglycemia: SI, side effect  
**hyperlipidemia: DT, drug therapy**  
 hyperlipidemia: SI, side effect  
 cardiovascular disease: SI, side effect  
 sexual dysfunction: DT, drug therapy  
 sexual dysfunction: SI, side effect  
 erectile dysfunction: DT, drug therapy  
 erectile dysfunction: SI, side effect  
 liver toxicity: SI, side effect  
 hyperbilirubinemia: SI, side effect  
 fatigue: SI, side effect  
 extrapyramidal symptom: SI, side effect  
 sedation  
 seizure: SI, side effect  
 coma: SI, side effect  
 mental disease: DT, drug therapy  
 mania: DT, drug therapy  
 drug alcohol interaction  
 food drug interaction  
 drug metabolism  
 liver transplantation  
 graft rejection: CO, complication  
 graft rejection: DT, drug therapy  
 graft rejection: PC, prevention  
 immunosuppressive treatment  
 drug contraindication  
 Cushing syndrome: SI, side effect  
 toxic hepatitis: SI, side effect  
 bleeding: SI, side effect  
 radiation enteropathy: CO, complication  
 radiation enteropathy: DT, drug therapy  
 lactic acidosis: SI, side effect  
 paresthesia: SI, side effect  
 Stevens Johnson syndrome: SI, side effect  
 taste disorder: SI, side effect  
 cheilitis: SI, side effect  
 dry eye: SI, side effect  
 xerostomia: SI, side effect  
 dry skin: SI, side effect  
 nephrolithiasis: SI, side effect  
 paronychia: SI, side effect  
 rash: SI, side effect  
 neutropenia: SI, side effect  
 leukocytoclastic vasculitis: SI, side effect  
 pancreatitis: SI, side effect  
 weight reduction  
 human  
 review

## CONTROLLED TERM:

## Drug Descriptors:

- \*antiretrovirus agent: AE, adverse drug reaction
- \*antiretrovirus agent: CB, drug combination
- \*antiretrovirus agent: CM, drug comparison

\*antiretrovirus agent: IT, drug interaction  
\*antiretrovirus agent: DT, drug therapy  
\*antiretrovirus agent: PK, pharmacokinetics  
\*antiretrovirus agent: PD, pharmacology  
\*proteinase inhibitor: AE, adverse drug reaction  
\*proteinase inhibitor: CB, drug combination  
\*proteinase inhibitor: CM, drug comparison  
\*proteinase inhibitor: IT, drug interaction  
\*proteinase inhibitor: DT, drug therapy  
\*proteinase inhibitor: PK, pharmacokinetics  
\*proteinase inhibitor: PD, pharmacology  
\*atazanavir: AE, adverse drug reaction  
\*atazanavir: IT, drug interaction  
\*atazanavir: DT, drug therapy  
\*atazanavir: PK, pharmacokinetics  
\*lopinavir plus ritonavir: AE, adverse drug reaction  
\*lopinavir plus ritonavir: CB, drug combination  
\*lopinavir plus ritonavir: IT, drug interaction  
\*lopinavir plus ritonavir: DT, drug therapy  
\*lopinavir plus ritonavir: PK, pharmacokinetics  
\*lopinavir plus ritonavir: PD, pharmacology  
\*lopinavir: AE, adverse drug reaction  
\*lopinavir: CB, drug combination  
\*lopinavir: IT, drug interaction  
\*lopinavir: DT, drug therapy  
\*lopinavir: PK, pharmacokinetics  
\*lopinavir: PD, pharmacology  
\*ritonavir: AE, adverse drug reaction  
\*ritonavir: CB, drug combination  
\*ritonavir: IT, drug interaction  
\*ritonavir: DT, drug therapy  
\*ritonavir: PK, pharmacokinetics  
\*ritonavir: PD, pharmacology  
antilipemic agent: AE, adverse drug reaction  
antilipemic agent: CB, drug combination  
antilipemic agent: IT, drug interaction  
antilipemic agent: DT, drug therapy  
hydroxymethylglutaryl coenzyme A reductase inhibitor: AE, adverse drug reaction  
hydroxymethylglutaryl coenzyme A reductase inhibitor: CB, drug combination  
hydroxymethylglutaryl coenzyme A reductase inhibitor: IT, drug interaction  
hydroxymethylglutaryl coenzyme A reductase inhibitor: DT, drug therapy  
simvastatin: AE, adverse drug reaction  
simvastatin: CB, drug combination  
simvastatin: IT, drug interaction  
simvastatin: DT, drug therapy  
atorvastatin: CB, drug combination  
atorvastatin: CR, drug concentration  
atorvastatin: IT, drug interaction  
atorvastatin: DT, drug therapy  
atorvastatin: PK, pharmacokinetics  
pravastatin: CB, drug combination  
pravastatin: IT, drug interaction  
pravastatin: DT, drug therapy  
sildenafil: CB, drug combination  
sildenafil: IT, drug interaction  
sildenafil: DT, drug therapy

varденафил: CB, drug combination  
varденафил: IT, drug interaction  
varденафил: DT, drug therapy  
тадалафил: CB, drug combination  
тадалафил: IT, drug interaction  
тадалафил: DT, drug therapy  
иммуносупрессивен агент: AE, adverse drug reaction  
иммуносупрессивен агент: CB, drug combination  
иммуносупрессивен агент: IT, drug interaction  
иммуносупрессивен агент: DT, drug therapy  
тсукубаенолид: AE, adverse drug reaction  
тсукубаенолид: CB, drug combination  
тсукубаенолид: IT, drug interaction  
тсукубаенолид: DT, drug therapy  
рапамycin: AE, adverse drug reaction  
рапамycin: CB, drug combination  
рапамycin: IT, drug interaction  
рапамycin: DT, drug therapy  
амфебутамон: AE, adverse drug reaction  
амфебутамон: IT, drug interaction  
амфебутамон: PK, pharmacokinetics  
рисперидон: AE, adverse drug reaction  
рисперидон: CB, drug combination  
рисперидон: IT, drug interaction  
рисперидон: DT, drug therapy  
рисперидон: PK, pharmacokinetics  
тразодон: AE, adverse drug reaction  
тразодон: CB, drug combination  
тразодон: CR, drug concentration  
тразодон: IT, drug interaction  
тразодон: DT, drug therapy  
тразодон: PK, pharmacokinetics  
золпидем: AE, adverse drug reaction  
золпидем: CB, drug combination  
золпидем: IT, drug interaction  
золпидем: DT, drug therapy  
золпидем: PK, pharmacokinetics  
будесонид: AE, adverse drug reaction  
будесонид: CB, drug combination  
будесонид: IT, drug interaction  
будесонид: DT, drug therapy  
будесонид: PK, pharmacokinetics  
флутиказон пропионат: AE, adverse drug reaction  
флутиказон пропионат: AD, drug administration  
флутиказон пропионат: CB, drug combination  
флутиказон пропионат: IT, drug interaction  
флутиказон пропионат: DT, drug therapy  
флутиказон пропионат: PK, pharmacokinetics  
флутиказон пропионат: IH, inhalational drug administration  
индинавир: AE, adverse drug reaction  
индинавир: CB, drug combination  
индинавир: IT, drug interaction  
индинавир: DT, drug therapy  
индинавир: PK, pharmacokinetics  
нелфинавир: AE, adverse drug reaction  
нелфинавир: CB, drug combination  
нелфинавир: IT, drug interaction  
нелфинавир: DT, drug therapy  
нелфинавир: PK, pharmacokinetics

nelfinavir: PD, pharmacology  
 amprenavir: AE, adverse drug reaction  
 CONTROLLED TERM: Drug Descriptors:  
 amprenavir: IT, drug interaction  
 amprenavir: DT, drug therapy  
 amprenavir: PK, pharmacokinetics  
 saquinavir: AE, adverse drug reaction  
 saquinavir: IT, drug interaction  
 saquinavir: DT, drug therapy  
 saquinavir: PK, pharmacokinetics  
 amprenavir phosphate: AE, adverse drug reaction  
 amprenavir phosphate: IT, drug interaction  
 amprenavir phosphate: DT, drug therapy  
 amprenavir phosphate: PK, pharmacokinetics  
 glycoprotein P  
 unindexed drug  
 lexiva  
 CAS REGISTRY NO.: (protease inhibitor) 37205-61-1; (atazanavir)  
 198904-31-3; (lopinavir) 192725-17-0; (ritonavir)  
 155213-67-5; (simvastatin) 79902-63-9; (atorvastatin)  
 134523-00-5, 134523-03-8; (pravastatin) 81131-74-0;  
 (sildenafil) 139755-83-2; (vardenafil) 224785-90-4,  
 224785-91-5, 224789-15-5; (tadalafil) 171596-29-5;  
 (tsukubaenolide) 104987-11-3; (rapamycin) 53123-88-9;  
 (amfebutamone) 31677-93-7, 34911-55-2; (risperidone)  
 106266-06-2; (trazodone) 19794-93-5, 25332-39-2; (zolpidem)  
 82626-48-0; (budesonide) 51333-22-3; (fluticasone  
 propionate) 80474-14-2; (indinavir) 150378-17-9,  
 157810-81-6, 180683-37-8; (nelfinavir) 159989-64-7,  
 159989-65-8; (amprenavir) 161814-49-9; (saquinavir)  
 127779-20-8, 149845-06-7; (amprenavir phosphate)  
 226700-79-4, 226700-80-7, 226700-81-8  
 CHEMICAL NAME: Lexiva; Crixivan; Agenerase; Wellbutrin; Flovent; Entocort;  
 Kaletra; Norvir; Reyataz; Viracept; Pravachol; Lipitor;  
 Zocor; Cialis; Levitra; Viagra

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ACCESSION NUMBER: 2004492410 EMBASE  
 TITLE: [Creation of a hospital guidebook of pharmaceutical  
 compounds with latex content].  
 ELABORACION DE UNA GUIA HOSPITALARIA DE ESPECIALIDADES  
 FARMACEUTICAS CON CONTENIDO EN LATEX.  
 AUTHOR: Jorge Vidal V.; Villamayor Blanco L.; Mira Sirvent Ma.C.;  
 Rabell Inigo S.; Martinez Penella M.; Herrero Lopez Ma. J.;  
 Martin Martin Ma.C.  
 CORPORATE SOURCE: V. Jorge Vidal, Servicio de Farmacia, Hospital Santa Ma del  
 Rosell, Cartagena, Murcia, Spain  
 SOURCE: Atencion Farmaceutica, (2004) Vol. 6, No. 4, pp. 262-274. .  
 Refs: 9  
 ISSN: 1139-7357 CODEN: AFARFP  
 COUNTRY: Spain  
 DOCUMENT TYPE: Journal; General Review  
 FILE SEGMENT: 017 Public Health, Social Medicine and Epidemiology  
 026 Immunology, Serology and Transplantation  
 037 Drug Literature Index  
 038 Adverse Reactions Titles  
 039 Pharmacy  
 LANGUAGE: Spanish  
 SUMMARY LANGUAGE: English; Spanish

ENTRY DATE: Entered STN: 14 Apr 2005  
Last Updated on STN: 14 Apr 2005

ABSTRACT: The significant increase in the number of latex allergies and the high consumption of medicines containing this compound in our hospital have led to the elaboration of a guide about the content of latex in medicines administered by parenteral route and intravenous fluids in order to increase drug safety of allergic patients. This guide was made by consultation with the technical departments of all pharmaceutical laboratories. The results are presented in tables showing the active principles or composition, the trade marks, pharmaceutical laboratory and the content of latex or not. This guide constitutes an effective measure to avoid the exposure of allergic patients to latex.

CONTROLLED TERM: Medical Descriptors:  
\*practice guideline  
\*consensus  
drug hypersensitivity: PC, prevention  
drug hypersensitivity: SI, side effect  
drug utilization  
chemical composition  
drug safety  
drug industry  
pharmaceutics  
clinical practice  
clinical feature  
hospital management  
human  
review

CONTROLLED TERM: Drug Descriptors:  
\*latex: AE, adverse drug reaction  
\*latex: PR, pharmaceutics  
infusion fluid  
abciximab: PR, pharmaceutics  
abciximab: PA, parenteral drug administration  
acetylcholine: PR, pharmaceutics  
acetylcholine: PA, parenteral drug administration  
aciclovir: PR, pharmaceutics  
aciclovir: PA, parenteral drug administration  
hyaluronic acid: PR, pharmaceutics  
hyaluronic acid: PA, parenteral drug administration  
zoledronic acid: PR, pharmaceutics  
zoledronic acid: PA, parenteral drug administration  
adenosine: PR, pharmaceutics  
adenosine: PA, parenteral drug administration  
albumin: PR, pharmaceutics  
albumin: PA, parenteral drug administration  
    **alpha 1 antitrypsin: PR, pharmaceutics**  
    **alpha 1 antitrypsin: PA, parenteral drug**  
    **administration**  
amifostine: PR, pharmaceutics  
amifostine: PA, parenteral drug administration  
amikacin: PR, pharmaceutics  
amikacin: PA, parenteral drug administration  
amoxicillin plus clavulanic acid: PR, pharmaceutics  
amoxicillin plus clavulanic acid: PA, parenteral drug  
administration  
ampicillin: PR, pharmaceutics  
ampicillin: PA, parenteral drug administration  
sultamicillin: PR, pharmaceutics  
sultamicillin: IM, intramuscular drug administration

sultamicillin: IV, intravenous drug administration  
amphotericin B: PR, pharmaceuticals  
amphotericin B: IV, intravenous drug administration  
amphotericin B lipid complex: PR, pharmaceuticals  
amphotericin B lipid complex: PA, parenteral drug administration  
azathioprine: PR, pharmaceuticals  
azathioprine: PA, parenteral drug administration  
aztreonam: PR, pharmaceuticals  
aztreonam: PA, parenteral drug administration  
cefazolin: PR, pharmaceuticals  
cefazolin: PA, parenteral drug administration  
cefotaxime: PR, pharmaceuticals  
cefotaxime: PA, parenteral drug administration  
carmustine: PR, pharmaceuticals  
carmustine: PA, parenteral drug administration  
caspofungin: PR, pharmaceuticals  
caspofungin: PA, parenteral drug administration  
cefuroxime: PR, pharmaceuticals  
cefuroxime: PA, parenteral drug administration  
cyclophosphamide: PR, pharmaceuticals  
cyclophosphamide: PA, parenteral drug administration  
cidofovir: PR, pharmaceuticals  
cidofovir: PA, parenteral drug administration  
cisplatin: PR, pharmaceuticals  
cisplatin: PA, parenteral drug administration  
cladribine: PR, pharmaceuticals  
cladribine: PA, parenteral drug administration  
cloxacillin: PR, pharmaceuticals  
cloxacillin: PA, parenteral drug administration  
unindexed drug  
acetylcholine  
injection  
domac  
alteplase  
fs 069  
recombinant interleukin 2  
prolactin  
tyrphostin  
radial  
meglumine diatrizoate  
gobemycin  
ampicillin  
fungizone endovenous  
digitalis antidote  
Pneumococcus vaccine  
pnu immune  
recombinant hepatitis B vaccine  
anbin  
azithromycin  
immucyst bcg immunotherapy  
BCG vaccine  
vejicur  
penbiot  
penilevel  
celestone cronodose  
salcatonin  
nitrofurantoin  
brizolam  
kefol

cefoxitin  
ceftazidime  
rocefin  
ciprofloxacin  
clarithromycin  
normofenicol  
clorazepate dipotassium  
prothromplex immuno tim  
soltrim 800 160  
dalteparin  
novel erythropoiesis stimulating protein  
daunorubicin  
deferoxamine mesylate  
diltiazem  
prepidil jer gel  
docetaxel  
doxorubicin  
farmiblastina  
drotrecogin  
enfuvirtide  
enoxaparin  
adrenalina level 1 1000  
epirubicin  
recombinant erythropoietin  
erythromycin ethylsuccinate  
brevivloc  
streptokinase  
etanercept  
blood clotting factor 8  
blood clotting factor 8 concentrate  
fanhdi  
recombinant granulocyte colony stimulating factor  
Drug Descriptors:  
fluconazole  
loitin  
beneflur  
folidan  
folinate calcium  
fondaparinux  
foscarnet sodium  
fosfomycin  
ganciclovir  
gemcitabine  
genta gobens  
gemtuzumab ozogamicin  
copaxona  
glucagon gen hipokit  
magnograf  
leo  
fibrilin  
actocortina  
tronoxal  
imiglucerase  
cilastatin plus imipenem  
indometacin  
infliximab  
immunoglobulin  
timoglobulina imtix  
novomix 30 flexpen pluma  
insulina insulatard nph

CONTROLLED TERM:

insulatard nph novolet  
insulina mixtard  
mixtard novolet  
insulina monotard  
insulina ultratard  
actrapid novolet  
actrapid  
humalog mix 25 pluma  
humalog mix 50 pluma  
humalog npl pen pluma  
intron a pluma  
peginterferon alpha2a  
peginterferon alpha2b  
recombinant alpha2a interferon  
betala interferon  
interferon beta serine  
omnigraf 300  
iohexol  
clarograf 240  
meglumine iotroxate  
ioversol  
optiray ultraject  
irinotecan  
isoflurane  
ketamine  
euprotin  
refludin  
procin depot  
procin trimestral  
procin  
levofloxacin  
levothyroxine sodium  
zyvodix  
medroxyprogesterone acetate  
meropenem  
solu moderin  
depo moderin  
methylprednisolone  
lederle  
metronidazole  
mitoxantrone  
fraxiparina  
fraxiparina forte  
nimodipine  
octreotide  
superoxide dismutase  
oxaliplatin  
paclitaxel  
palivizumab  
pamidronic acid  
linoten  
pantocarm  
perfalan  
pentamidine isethionate  
tazocel  
procainamide  
propofol  
protamina leo  
trh prem  
raltitrexed

rasburicase  
remifentanyl  
rifampicin  
risperidone  
rituximab  
ropivacaine  
silymarin  
sumatriptan succinate  
teicoplanin  
tenecteplase  
anestesico topico  
pentothal sodico  
agratat  
recombinant thyrotropin  
tobramycin  
topotecan  
botulinum toxin A  
anatoxal tedi berna  
varicella zoster vaccine  
trastuzumab  
urokinase vedim  
valproic acid  
freamine hbc  
nephramine  
gelafundina  
rheomacroderm glucosado  
rheomacroderm salino  
alanylglutamine  
voluven  
kabiven periferica  
cernevit  
primene  
vamin

CONTROLLED TERM: Drug Descriptors:

CAS REGISTRY NO.: soluvit  
(abciximab) 143653-53-6; (acetylcholine) 51-84-3, 60-31-1, 66-23-9; (aciclovir) 59277-89-3; (hyaluronic acid) 31799-91-4, 9004-61-9, 9067-32-7; (zoledronic acid) 118072-93-8, 131654-46-1, 165800-06-6, 165800-07-7; (adenosine) 58-61-7; (alpha 1 antitrypsin) 9041-92-3; (amifostine) 20537-88-6; (amikacin) 37517-28-5, 39831-55-5; (amoxicillin plus clavulanic acid) 74469-00-4; (ampicillin) 69-52-3, 69-53-4, 7177-48-2, 74083-13-9, 94586-58-0; (sultamicillin) 76497-13-7; (amphotericin B) 1397-89-3, 30652-87-0; (azathioprine) 446-86-6; (aztreonam) 78110-38-0; (cefazolin) 25953-19-9, 27164-46-1; (cefotaxime) 63527-52-6, 64485-93-4; (carmustine) 154-93-8; (caspofungin) 189768-38-5; (cefuroxime) 55268-75-2, 56238-63-2; (cyclophosphamide) 50-18-0; (cidofovir) 113852-37-2; (cisplatin) 15663-27-1, 26035-31-4, 96081-74-2; (cladribine) 4291-63-8; (cloxacillin) 61-72-3, 642-78-4; (alteplase) 105857-23-6; (recombinant interleukin 2) 110942-02-4; (meglumine diatrizoate) 131-49-7; (azithromycin) 83905-01-5; (salcatonin) 47931-85-1; (cefoxitin) 33564-30-6, 35607-66-0; (ceftazidime) 72558-82-8; (ciprofloxacin) 85721-33-1; (clarithromycin) 81103-11-9; (clorazepate dipotassium) 57109-90-7; (daunorubicin) 12707-28-7, 20830-81-3, 23541-50-6; (deferioxamine mesylate) 138-14-7, 5115-09-3; (diltiazem) 33286-22-5, 42399-41-7; (docetaxel) 114977-28-5;

(doxorubicin) 23214-92-8, 25316-40-9; (drotrecogin) 357194-87-7; (enfuvirtide) 159519-65-0; (enoxaparin) 9041-08-1; (epirubicin) 56390-09-1, 56420-45-2; (recombinant erythropoietin) 113427-24-0, 122312-54-3, 130455-76-4; (erythromycin ethylsuccinate) 1264-62-6; (streptokinase) 9002-01-1; (etanercept) 185243-69-0, 200013-86-1; (blood clotting factor 8) 9001-27-8; (recombinant granulocyte colony stimulating factor) 121181-53-1; (fluconazole) 86386-73-4; (folinate calcium) 1492-18-8, 51057-63-7; (fondaparinux) 104993-28-4, 114870-03-0; (foscarnet sodium) 63585-09-1; (fosfomycin) 23155-02-4; (ganciclovir) 82410-32-0; (gemcitabine) 103882-84-4; (imiglucerase) 154248-97-2; (cilastatin plus imipenem) 92309-29-0; (indometacin) 53-86-1, 74252-25-8, 7681-54-1; (infliximab) 170277-31-3; (immunoglobulin) 9007-83-4; (peginterferon alpha2a) 198153-51-4; (peginterferon alpha2b) 215647-85-1; (interferon beta serine) 90598-63-3; (iohexol) 66108-95-0; (meglumine iotroxate) 72704-51-9; (ioversol) 87771-40-2; (irinotecan) 100286-90-6; (isoflurane) 26675-46-7; (ketamine) 1867-66-9, 6740-88-1, 81771-21-3; (levofloxacin) 100986-85-4, 138199-71-0; (levothyroxine sodium) 55-03-8; (medroxyprogesterone acetate) 71-58-9; (meropenem) 96036-03-2; (methylprednisolone) 6923-42-8, 83-43-2; (metronidazole) 39322-38-8, 443-48-1; (mitoxantrone) 65271-80-9, 70476-82-3; (nimodipine) 66085-59-4; (octreotide) 83150-76-9; (superoxide dismutase) 37294-21-6, 9016-01-7, 9054-89-1; (oxaliplatin) 61825-94-3; (paclitaxel) 33069-62-4; (palivizumab) 188039-54-5; (pamidronic acid) 40391-99-9, 57248-88-1; (pentamidine isethionate) 140-64-7; (procainamide) 51-06-9, 614-39-1; (propofol) 2078-54-8; (raltitrexed) 112887-68-0; (rasburicase) 352311-12-7; (remifentanyl) 132539-07-2; (rifampicin) 13292-46-1; (risperidone) 106266-06-2; (rituximab) 174722-31-7; (ropivacaine) 84057-95-4; (silymarin) 65666-07-1; (sumatriptan succinate) 103628-48-4; (teicoplanin) 61036-62-2, 61036-64-4; (tenecteplase) 191588-94-0; (recombinant thyrotropin) 194100-83-9; (tobramycin) 32986-56-4; (topotecan) 119413-54-6, 123948-87-8; (botulinum toxin A) 93384-43-1; (trastuzumab) 180288-69-1; (valproic acid) 1069-66-5, 99-66-1; (alanylglutamine) 39537-23-0; (vamin) 81099-37-8

(1) Reopro; (2) Acetilcolina cusi; (3) Inyesprin; (4) Domac; (5) Adant; (6) Hyalgan; (7) Zometa; (8) Actilyse; (9) Adenocor; (10) Optison; (11) Proleukin; (12) Prolastina; (13) Tyrpsone; (14) Radialar; (15) Urografin; (16) Uroangiografin; (17) Ethylol; (18) Augmentin; (19) Gobemicina; (20) Ampicilina ges; (21) Unasyn; (22) Fungizona endovenosa; (23) Abelcet; (24) Ambisome; (25) Digitalis antidot; (26) Pneumo 23; (27) Pnu immune; (28) Engerix b; (29) Anbin; (30) Imurel; (31) Zitromax; (32) Azactam; (33) Immucyst bcg immunoterapia; (34) Oncotice; (35) Vejicur; (36) Penbiot; (37) Penilevel; (38) Celestone cronodose; (39) Calsynar; (40) Nitrourean; (41) Cancidas; (42) Kurgan; (43) Brizolina; (44) Kefol; (45) Mefoxitin; (46) Fortam; (47) Rocefalin; (48) Curoxima; (49) Genoxal; (50) Vistide; (51) Rigoran; (52) Baycip; (53) Leustatin; (54) Klacid; (55) Bremon; (56) Normofenicol; (57) Tranxilium; (58) Orbenin; (59) Prothromplex immuno tim; (60) Soltrim 800 160; (61) Fragmin; (62) Aranesp; (63)

CHEMICAL NAME:

Daunoxome; (64) Daunoblastina; (65) Desferin; (66) Masdil;  
 (67) Prepidil jer gel; (68) Taxotere; (69) Caelyx; (70)  
 Farmiblastina; (71) Xigris; (72) Fuzeon; (73) Clexane; (74)  
 Adrenalina level 1 1000; (75) Farmorubicina; (76) Eprex;  
 (77) Pantomicina; (78) Brevivloc; (79) Streptase; (80)  
 Enbrel; (81) Haemate p; (82) Hemofil m; (83) Fanhdi; (84)  
 Neupogen; (85) Diflucan; (86) Loitin; (87) Beneflur; (88)  
 Folidan; (89) Lederfolin; (90) Arixtra; (91) Foscavir; (92)  
 Fosfocina; (93) Cymevene; (94) Gemzar; (95) Genta gobens;  
 (96) Mylotarg; (97) Copaxona; (98) Glucagon gen hipokit;  
 (99) Magnograf; (100) Leo; (101) Fibrilin; (102)  
 Actocortina; (103) Tronoxal; (104) Cerezyme; (105) Tienam;  
 (106) Inacid; (107) Remicade; (108) Endobulin; (109)  
 Flebogamma; (110) Timoglobulina imtix; (111) Novomix 30  
 flexpen pluma; (112) Insulina insulatard nph; (113)  
 Insulatard nph novolet; (114) Insulina mixtard; (115)  
 Mixtard novolet; (116) Insulina monotard; (117) Insulina  
 ultratard; (118) Actrapid novolet; (119) Actrapid; (120)  
 Humalog mix 25 pluma; (121) Humalog mix 50 pluma; (122)  
 Humalog npl pen pluma; (123) Intron a pluma; (124) Pegasys;  
 (125) Pegintron; (126) Roferon a; (127) Avonex; (128)  
 Rebif; (129) Betaferon; (130) Omnigraf 300; (131) Omnitrast  
 300; (132) Clarograf 240; (133) Bilisegrol; (134) Optiray;  
 (135) Optiray ultraject; (136) Campto; (137) Forane; (138)  
 Ketolar; (139) Euprotin; (140) Recludin; (141) Procin  
 depot; (142) Procin trimestral; (143) Procin; (144)  
 Tavanic; (145) Levothroid; (146) Zydovix; (147) Farlutal  
 depot; (148) Meronem; (149) Solu moderin; (150) Depo  
 moderin; (151) Urbason; (152) Lederle; (153) Flagyl; (154)  
 Novantrone; (155) Fraxiparina; (156) Fraxiparina forte;  
 (157) Nimotop; (158) Sandostatin; (159) Ontosein; (160)  
 Eloxatin; (161) Taxol; (162) Synagis; (163) Aredia; (164)  
 Linoten; (165) Pantocarm; (166) Perfalan; (167) Neulasta;  
 (168) Pentacarinat; (169) Tazocel; (170) Biocoryl; (171)  
 Diprivan; (172) Protamina leo; (173) Trh prem; (174)  
 Tomudex; (175) Fasturtec; (176) Ultiva; (177) Rifaldin;  
 (178) Risperdal consta; (179) Mabthera; (180) Naropin;  
 (181) Legalon; (182) Imigran; (183) Targocid; (184)  
 Metalyse; (185) Anestesico topico; (186) Pentothal sodico;  
 (187) Agrastat; (188) Thyrogen; (189) Tobra gobens; (190)  
 Hycamtin; (191) Botox; (192) Anatoxal tedi berna; (193)  
 Varilrix; (194) Herceptin; (195) Urokinase vedim; (196)  
 Prevenar; (197) Depakine; (198) Freamine hbc; (199)  
 Nephramine; (200) Gelafundina; (201) Rheomacrodex  
 glucosado; (202) Rheomacrodex salino; (203) Dipeptiven;  
 (204) Voluven; (205) Kabiven periferica; (206) Cernevit;  
 (207) Primene; (208) Vamin; (209) Soluvit  
 (2) Alcon cusi (Spain); (3) Gruenenthal (Spain); (6)  
 Iberica; (10) Amersham (Spain); (11) Chiron (Spain); (20)  
 GES Genericos (Spain); (21) Farmasierra (Spain); (23)  
**Elan (Spain)**; (26) Aventis Pasteur (Spain); (30)  
 Celltech; (33) Inibsa (Spain)  
 (34) Organon (Spain); (55) Pen (Spain); (63) Gilead  
 (Spain); (66) Esteve (Spain); (81) Aventis Behring (Spain);  
 (86) Lesvi (Spain); (92) ERN (Spain); **(109) Grifols**  
**(Spain)**; (110) Imtix Sangstat (Spain); (119) Novo  
 Nordisk (Spain); (122) Lilly; (127) Schering Plough  
 (Spain); (128) Serono (Spain); (132) Juste (Spain); (133)  
 Schering (Spain); (135) Tyco Healthcare (Spain); (139)  
 Almirall Prodesfarma (Spain); (140) Pharmion (Spain); (150)

COMPANY NAME:

COMPANY NAME:

Pfizer (Spain); (157) Bayer (Spain); (159) Tedec Meiji (Spain); (164) Rovi (Spain); (166) Bristol Myers Squibb (Spain); (167) Amgen (Spain); (170) Uriach (Spain); (172) Altana (Spain); (173) Novartis (Spain); (178) Janssen Cilag (Spain); (180) Astra Zeneca (Spain); (181) Madaus Cerafarm (Spain); (183) Aventis (Spain); (184) Boehringer Ingelheim (Spain); (186) Abbott (Spain); (187) Merck Sharp and Dohme (Spain); (188) Genzyme (Spain); (189) Normon (Spain); (191) Allergan (Spain); (192) Berna (Spain); (193) Glaxo SmithKline; (194) Hoffmann La Roche (Spain); (195) UCB (Spain); (196) Wyeth (Spain); (197) Sanofi Synthelabo (Spain); (200) Braun (Spain); (207) Baxter (Spain); (209) Fresenius Kabi (Spain); Combino (Spain); Ips (Spain); Ferrer (Spain); Frexenius Mein (Spain)

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ACCESSION NUMBER: 2003163081 EMBASE  
 TITLE: Management of heparin resistance during cardiopulmonary bypass: The effect of five different anticoagulation strategies on hemostatic activation.  
 AUTHOR: Koster A.; Fischer T.; Gruendel M.; Mappes A.; Kuebler W.M.; Bauer M.; Kuppe H.  
 CORPORATE SOURCE: Dr. A. Koster, Deutsches Herzzentrum Berlin, Augustenburger Platz 1, 13353 Berlin, Germany. Koster@dhzb.de  
 SOURCE: Journal of Cardiothoracic and Vascular Anesthesia, (2003) Vol. 17, No. 2, pp. 171-175. .  
 Refs: 17  
 ISSN: 1053-0770 CODEN: JCVAEK  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 018 Cardiovascular Diseases and Cardiovascular Surgery  
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 025 Hematology  
 037 Drug Literature Index  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English  
 ENTRY DATE: Entered STN: 9 May 2003  
 Last Updated on STN: 9 May 2003

ABSTRACT: Objective: Attenuation of hemostatic activation is a central goal during CPB. However, this poses a problem in patients insensitive to heparin. The present investigation was performed to assess different strategies of managing patients with heparin resistance during CPB. Design: A randomized, prospective clinical investigation. Setting: A major European heart center. Participants: Five groups with 20 patients each were investigated. Interventions: The groups were handled as follows: (1) maintenance of a target ACT, (2) maintenance of the target unfractionated heparin (UFH) level and supplementation of a UFH level-based strategy with (3) AT III, (4) the direct thrombin inhibitor r-hirudin, or (5) the short-acting platelet \*\*\*glycoprotein\*\*\* (GP) IIb/IIIa antagonist tirofiban. Platelet count and generation of contact factor XIIa, thrombin, and soluble fibrin were assessed. Samples were obtained before CPB and after CPB before protamine infusion. Measurements and Main Results: There were no differences observed in the generation of factor XIIa. The UFH-based strategy and supplementation with AT III, r-hirudin, and tirofiban resulted in significantly reduced ( $p < 0.05$ ) thrombin generation compared with ACT management. A significant reduction of fibrin formation was seen only in patients who received AT III, r-hirudin, or tirofiban supplementation to the UFH. The administration of tirofiban resulted in a significant preservation of the platelet count compared with the other groups. There were no significant differences in the postoperative blood loss.

Conclusions: Activation of hemostasis during CPB in heparin-resistant patients most likely has to be attributed to stimulation of the tissue factor pathway. Even the sole use of high concentrations of UFH does not effectively inhibit this activation. Therefore, in these patients anticoagulation during CPB with UFH should be supplemented with either AT III, a short-acting direct thrombin inhibitor, or a short-acting platelet **glycoprotein IIb/IIIa** antagonist. .COPYRG. 2003 Elsevier Inc. All rights reserved.

CONTROLLED TERM: Medical Descriptors:  
 \*anticoagulation  
 \*cardiopulmonary bypass  
 \*hemostasis  
 blood clotting time  
 maintenance therapy  
 fibrin formation  
 postoperative hemorrhage: CO, complication  
 drug megadose  
 human  
 male  
 female  
 major clinical study  
 clinical trial  
 randomized controlled trial  
 controlled study  
 aged  
 adult  
 article  
 priority journal  
 Drug Descriptors:  
 \*heparin: CT, clinical trial  
 \*heparin: DO, drug dose  
 thrombin inhibitor: CT, clinical trial  
 hirudin: CT, clinical trial  
 antithrombin III: CT, clinical trial  
 fibrinogen receptor antagonist: CT, clinical trial  
 tirofiban: CT, clinical trial  
 blood clotting factor 12a: EC, endogenous compound  
 thrombin: EC, endogenous compound  
 fibrin: EC, endogenous compound  
 protamine: CT, clinical trial  
 thromboplastin: EC, endogenous compound  
 lepirudin  
 CAS REGISTRY NO.: (heparin) 37187-54-5, 8057-48-5, 8065-01-8, 9005-48-5;  
 (hirudin) 8001-27-2; (antithrombin III) 90170-80-2;  
 (tirofiban) 142373-60-2, 144494-65-5, 150915-40-5;  
 (thrombin) 9002-04-4; (fibrin) 9001-31-4; (protamine)  
 11061-43-1, 9007-31-2, 9012-00-4; (thromboplastin)  
 9035-58-9; (lepirudin) 138068-37-8  
 CHEMICAL NAME: (1) Refludan; (2) Aggrastat; Hepcon  
 COMPANY NAME: (1) Aventis (Germany); (2) Merck Sharp and Dohme (Germany);  
**Grifols (Germany)**

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ACCESSION NUMBER: 2003412040 EMBASE  
 TITLE: Shifting paradigms: Biopharmaceuticals versus low  
**molecular weight** drugs.  
 AUTHOR: Crommelin D.J.A.; Storm G.; Verrijck R.; De Leede L.;  
 Jiskoot W.; Hennink W.E.  
 CORPORATE SOURCE: D.J.A. Crommelin, Department of Pharmaceutics, Utrecht

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Netherlands. D.J.A.Crommelin@pharm.uu.nl  
International Journal of Pharmaceutics, (6 Nov 2003) Vol.  
266, No. 1-2, pp. 3-16. .

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038 Adverse Reactions Titles  
039 Pharmacy

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 30 Oct 2003

Last Updated on STN: 30 Oct 2003

ABSTRACT: Biopharmaceuticals are pharmaceutical products consisting of (glyco)proteins. Nowadays a substantial part of the FDA-approved drugs belong to this class of drugs. Biopharmaceuticals deserve special attention as they have a number of characteristics that set them aside from low **molecular \*\*\*weight\*\*\*** drugs. Their activity depends on their complicated shape based on secondary, tertiary and (sometimes) quaternary structures. These structures cannot be fully defined with our present set of analytical techniques and approaches for potency testing. They often are the same as (or closely resemble) endogenous proteins. This means that in safety testing and clinical test programs questions have to be addressed regarding species specific responses, selection of dosing schedules and route of administration, and the possible occurrence of immunogenicity. As the conformational structure of a protein is easily disturbed, formulation and handling of biopharmaceuticals needs special attention in order to optimize the therapeutic effect and minimize adverse reaction, among which immune responses. The issue of biogenerics is gaining more and more interest and different critical elements in the development of biogenerics are touched upon. In conclusion, biopharmaceuticals cannot be characterized fully in terms of their structure like low **molecular weight** drugs. The performance of biopharmaceuticals relies on strict production protocols and close monitoring of their activity in the clinical situation. .COPYRG.T. 2003 Published by Elsevier B.V.

CONTROLLED TERM: Medical Descriptors:  
\*pharmacy  
**molecular weight**  
food and drug administration  
drug activity  
drug structure  
drug potency  
drug safety  
immunogenicity  
conformation  
drug effect  
immune response  
drug monitoring  
side effect: SI, side effect  
thrombocytopenia: SI, side effect  
**diabetes mellitus: DT, drug therapy**  
drug formulation  
human  
nonhuman  
review

priority journal  
CONTROLLED TERM: Drug Descriptors:  
\*glycoprotein: AE, adverse drug reaction  
  \*glycoprotein: AD, drug administration  
  \*glycoprotein: DT, drug therapy  
\*glycoprotein: PR, pharmaceuticals  
  \*glycoprotein: PK, pharmacokinetics  
  \*glycoprotein: PD, pharmacology  
\*glycoprotein: IV, intravenous drug administration  
\*glycoprotein: PO, oral drug administration  
\*glycoprotein: SC, subcutaneous drug administration  
abciximab: PR, pharmaceuticals  
abciximab: PK, pharmacokinetics  
abciximab: PD, pharmacology  
abciximab: SC, subcutaneous drug administration  
pertussis vaccine: AD, drug administration  
pertussis vaccine: PR, pharmaceuticals  
pertussis vaccine: PK, pharmacokinetics  
pertussis vaccine: PD, pharmacology  
pertussis vaccine: SC, subcutaneous drug administration  
recombinant interleukin 2: PR, pharmaceuticals  
recombinant interleukin 2: PK, pharmacokinetics  
recombinant interleukin 2: PD, pharmacology  
recombinant interleukin 2: SC, subcutaneous drug administration  
alteplase: PR, pharmaceuticals  
alteplase: PK, pharmacokinetics  
alteplase: PD, pharmacology  
alteplase: SC, subcutaneous drug administration  
recombinant blood clotting factor 8: PR, pharmaceuticals  
recombinant blood clotting factor 8: PK, pharmacokinetics  
recombinant blood clotting factor 8: PD, pharmacology  
recombinant blood clotting factor 8: SC, subcutaneous drug administration  
basiliximab: PR, pharmaceuticals  
basiliximab: PK, pharmacokinetics  
basiliximab: PD, pharmacology  
basiliximab: SC, subcutaneous drug administration  
daclizumab: PR, pharmaceuticals  
daclizumab: PK, pharmacokinetics  
daclizumab: PD, pharmacology  
daclizumab: SC, subcutaneous drug administration  
denileukin diftiox: PR, pharmaceuticals  
denileukin diftiox: PK, pharmacokinetics  
denileukin diftiox: PD, pharmacology  
denileukin diftiox: SC, subcutaneous drug administration  
deoxyribonuclease: PR, pharmaceuticals  
deoxyribonuclease: PK, pharmacokinetics  
deoxyribonuclease: PD, pharmacology  
deoxyribonuclease: SC, subcutaneous drug administration  
etanercept: PR, pharmaceuticals  
etanercept: PK, pharmacokinetics  
etanercept: PD, pharmacology  
etanercept: SC, subcutaneous drug administration  
recombinant erythropoietin: AE, adverse drug reaction  
recombinant erythropoietin: PR, pharmaceuticals  
recombinant erythropoietin: PK, pharmacokinetics  
recombinant erythropoietin: PD, pharmacology  
recombinant erythropoietin: SC, subcutaneous drug administration

eptifibatide: PR, pharmaceuticals  
eptifibatide: PK, pharmacokinetics  
eptifibatide: PD, pharmacology  
eptifibatide: SC, subcutaneous drug administration  
recombinant granulocyte colony stimulating factor: PR, pharmaceuticals  
recombinant granulocyte colony stimulating factor: PK, pharmacokinetics  
recombinant granulocyte colony stimulating factor: PD, pharmacology  
recombinant granulocyte colony stimulating factor: SC, subcutaneous drug administration  
blood clotting factor 7: PR, pharmaceuticals  
blood clotting factor 7: PK, pharmacokinetics  
blood clotting factor 7: PD, pharmacology  
blood clotting factor 7: SC, subcutaneous drug administration  
blood clotting factor 9: PR, pharmaceuticals  
blood clotting factor 9: PK, pharmacokinetics  
blood clotting factor 9: PD, pharmacology  
blood clotting factor 9: SC, subcutaneous drug administration  
follitropin: PR, pharmaceuticals  
follitropin: PK, pharmacokinetics  
follitropin: PD, pharmacology  
follitropin: SC, subcutaneous drug administration  
ganirelix: PR, pharmaceuticals  
ganirelix: PK, pharmacokinetics  
ganirelix: PD, pharmacology  
ganirelix: SC, subcutaneous drug administration  
gemtuzumab ozogamicin: PR, pharmaceuticals  
gemtuzumab ozogamicin: PK, pharmacokinetics  
gemtuzumab ozogamicin: PD, pharmacology  
gemtuzumab ozogamicin: SC, subcutaneous drug administration  
glatiramer: PR, pharmaceuticals  
glatiramer: PK, pharmacokinetics  
glatiramer: PD, pharmacology  
glatiramer: SC, subcutaneous drug administration  
glucagon: PR, pharmaceuticals  
glucagon: PK, pharmacokinetics  
glucagon: PD, pharmacology  
glucagon: SC, subcutaneous drug administration  
growth hormone releasing factor: PR, pharmaceuticals  
growth hormone releasing factor: PK, pharmacokinetics  
growth hormone releasing factor: PD, pharmacology  
growth hormone releasing factor: SC, subcutaneous drug administration  
hepatitis B vaccine: AD, drug administration  
hepatitis B vaccine: PR, pharmaceuticals  
hepatitis B vaccine: PK, pharmacokinetics  
hepatitis B vaccine: PD, pharmacology  
imiglucerase: PR, pharmaceuticals  
imiglucerase: PK, pharmacokinetics  
imiglucerase: PD, pharmacology  
imiglucerase: SC, subcutaneous drug administration  
infliximab: PR, pharmaceuticals  
infliximab: PK, pharmacokinetics  
infliximab: PD, pharmacology  
infliximab: SC, subcutaneous drug administration  
insulin: DT, drug therapy

insulin: PR, pharmaceuticals  
 insulin: PK, pharmacokinetics  
 insulin: PD, pharmacology  
 insulin: SC, subcutaneous drug administration  
 alpha interferon: PR, pharmaceuticals  
 alpha interferon: PK, pharmacokinetics  
 alpha interferon: PD, pharmacology  
 alpha interferon: SC, subcutaneous drug administration  
 alpha interferon C: PR, pharmaceuticals  
 alpha interferon C: PK, pharmacokinetics  
 alpha interferon C: PD, pharmacology  
 alpha interferon C: SC, subcutaneous drug administration  
**CONTROLLED TERM:** Drug Descriptors:  
 beta interferon: PR, pharmaceuticals  
     **beta interferon: PK, pharmacokinetics**  
     **beta interferon: PD, pharmacology**  
 beta interferon: SC, subcutaneous drug administration  
     **unindexed drug**  
**CAS REGISTRY NO.:** (abciximab) 143653-53-6; (recombinant interleukin 2)  
 110942-02-4; (alteplase) 105857-23-6; (denileukin diftitox)  
 173146-27-5; (deoxyribonuclease) 37211-67-9; (etanercept)  
 185243-69-0, 200013-86-1; (recombinant erythropoietin)  
 113427-24-0, 122312-54-3, 130455-76-4; (eptifibatide)  
 148031-34-9; (recombinant granulocyte colony stimulating  
 factor) 121181-53-1; (blood clotting factor 7) 9001-25-6;  
 (blood clotting factor 9) 9001-28-9; (follitropin)  
 9002-68-0; (ganirelix) 123246-29-7, 124904-93-4,  
 129311-55-3; (glatiramer) 147245-92-9, 28704-27-0;  
 (glucagon) 11140-85-5, 62340-29-8, 9007-92-5; (growth  
 hormone releasing factor) 83930-13-6, 9034-39-3;  
 (imiglucerase) 154248-97-2; (infliximab) 170277-31-3;  
 (insulin) 9004-10-8

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**ACCESSION NUMBER:** 2003079159 EMBASE  
**TITLE:** Beta cell-specific CD80 (B7-1) expression disrupts tissue protection from autoantigen-specific CTL-mediated diabetes.  
**AUTHOR:** Pechhold K.; Karges W.; Blum C.; Boehm B.O.; Harlan D.M.  
**CORPORATE SOURCE:** K. Pechhold, NIDDK Transplant./Autoimmunity Br., NIMC/AFRRI Building 46, 8901 Wisconsin Avenue, Bethesda, MD 20889, United States. klausp@intra.niddk.nih.gov  
**SOURCE:** Journal of Autoimmunity, (2003) Vol. 20, No. 1, pp. 1-13. . Refs: 61  
 ISSN: 0896-8411 CODEN: JOAUEP  
**COUNTRY:** United Kingdom  
**DOCUMENT TYPE:** Journal; Article  
**FILE SEGMENT:** 003 Endocrinology  
 026 Immunology, Serology and Transplantation  
 037 Drug Literature Index  
**LANGUAGE:** English  
**SUMMARY LANGUAGE:** English  
**ENTRY DATE:** Entered STN: 27 Feb 2003  
 Last Updated on STN: 27 Feb 2003

**ABSTRACT:** T cell responses toward pancreatic beta cell autoantigens arise spontaneously or on immunization in many mouse strains, yet sustained islet infiltration and progressive diabetes rarely ensues. Most mouse diabetes models overcome the innocuous coexistence of anti-islet specific T cells and endogenous islets via incompletely understood mechanisms (e.g. the spontaneous disease onset of the non-obese diabetic mouse) or depend on overwhelming

numbers of peripheral islet-specific T cells. We report that insulin promoter murine CD80 (RIP-CD80) transgenic mice are extraordinarily susceptible to autoantigen-induced diabetes, while spontaneous disease is rare. Autoimmunity to the pancreatic beta cell-expressed glycoprotein (GP) of the lymphocytic choriomeningitis virus (LCMV) was elicited by a single injection of syngeneic fibroblastoid cell lines (FCL) loaded with the immunodominant LCMV-GP peptide, gp33. While both RIP-GP(+) and RIP-CD80(+)GP(+) mice mounted moderate CD4-independent CTL responses, only CD80(+)GP(+) mice developed severe insulinitis and diabetes due to islet-infiltration of activated, gp33-specific, CD8(+) T cells. Strikingly, DNA immunization using plasmids encoding LCMV-GP or murine preproinsulin also efficiently induced Ag-specific RIP-CD80-dependent diabetes. We conclude that aberrant CD80-expression in a peripheral tissue disrupts that tissue's natural resistance to CD8 T cell-mediated autoimmune destruction. This rodent model thus represents a novel approach to identify beta cell-derived autoantigenic determinants involved in the pathogenesis of autoimmune diabetes, and may also serve as a prototype approach to uncover relevant autoantigens leading to a variety of organ-specific autoimmune disorders. .COPYRIGHT. 2003 Elsevier Science Ltd. All rights reserved.

CONTROLLED TERM: Medical Descriptors:  
     \*diabetes mellitus: DT, drug therapy  
     \*diabetes mellitus: PC, prevention  
     protein expression  
     pancreas islet beta cell  
     disease course  
     promoter region  
     transgenic mouse  
     autoimmunity  
     Lymphocytic choriomeningitis virus  
     fibroblast  
     cell line  
     antigen specificity  
     immunization  
     nonhuman  
     mouse  
     animal model  
     controlled study  
     animal cell  
     article  
     nucleotide sequence  
     priority journal  
     Drug Descriptors:  
     \*autoantigen: EC, endogenous compound  
     \*B7 antigen: EC, endogenous compound  
     glycoprotein: EC, endogenous compound  
     preproinsulin: EC, endogenous compound  
     plasmid DNA: DT, drug therapy  
     lymphocytic choriomeningitis virus glycoprotein: DT,  
     drug therapy  
     CD4 antigen: EC, endogenous compound  
     unclassified drug  
 CAS REGISTRY NO.: (preproinsulin) 61116-24-3  
 GENE NUMBER: GENBANK X04724 referred number

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ACCESSION NUMBER: 2002268960 EMBASE

TITLE: Human antibodies against amyloid  $\beta$  peptide: A potential treatment for Alzheimer's disease.

AUTHOR: Dodel R.; Hampel H.; Depboylu C.; Lin S.; Gao F.; Schock

CORPORATE SOURCE: S.; Jackel S.; Wei X.; Buerger K.; Hoft C.; Hemmer B.; Moller H.-J.; Farlow M.; Oertel W.H.; Sommer N.; Du Y. Dr. R. Dodel, Department of Neurology, Philipps University, Rudolf-Bultmann Strasse 8, 35039 Marburg, Germany. dodel@mail.uni-marburg.de

SOURCE: Annals of Neurology, (2002) Vol. 52, No. 2, pp. 253-256. . Refs: 20

COUNTRY: ISSN: 0364-5134 CODEN: ANNED3 United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 008 Neurology and Neurosurgery  
026 Immunology, Serology and Transplantation  
029 Clinical Biochemistry  
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 5 Sep 2002  
Last Updated on STN: 5 Sep 2002

ABSTRACT: Naturally occurring antibodies directed against  $\beta$ -amyloid (A $\beta$ ) were detected in intravenous immunoglobulin preparations. After intravenous immunoglobulin treatment in patients with different neurological diseases, total A $\beta$  and A $\beta$ (1-42) in the cerebrospinal fluid was reduced significantly compared with baseline values. In the serum, total A $\beta$  levels increased after intravenous immunoglobulin treatment, whereas no significant change was observed in A $\beta$ (1-42) levels. Antibodies against A $\beta$  were found to be increased in the serum and cerebrospinal fluid after intravenous immunoglobulin treatment. This study provides evidence that intravenous immunoglobulin or purified A $\beta$  antibodies may modify A $\beta$  and A $\beta$ (1-42) levels, suggesting potential utility as a therapy for Alzheimer disease.

CONTROLLED TERM: Medical Descriptors:  
\*antibody detection  
\*Alzheimer disease: DI, diagnosis  
peptide analysis  
neurologic disease: DT, drug therapy  
cerebrospinal fluid examination  
protein cerebrospinal fluid level  
reference value  
protein purification  
protein modification  
diagnostic value  
human  
male  
female  
clinical article  
aged  
adult  
article  
priority journal  
Drug Descriptors:  
\*amyloid beta protein: EC, endogenous compound  
\*immunoglobulin: DT, drug therapy  
\*immunoglobulin: PR, pharmaceuticals  
\*immunoglobulin: IV, intravenous drug administration  
immunoglobulin G

CAS REGISTRY NO.: (amyloid beta protein) 109770-29-8; (immunoglobulin) 9007-83-4; (immunoglobulin G) 97794-27-9

CHEMICAL NAME: (1) Octagam; (2) Flebogamma

COMPANY NAME: (1) Octapharma (Germany); (2) Grifols

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ACCESSION NUMBER: 2001436263 EMBASE  
TITLE: Antithrombin III prevents early pulmonary dysfunction after lung transplantation in the dog.  
AUTHOR: Salvatierra A.; Guerrero R.; Rodriguez M.; Alvarez A.; Soriano F.; Lopez-Pedreria R.; Ramirez R.; Carracedo J.; Lopez-Rubio F.; Lopez-Pujol J.; Velasco F.  
CORPORATE SOURCE: Dr. M. Rodriguez, Unidad de Investigacion, Hospital Univ. Reina Sofia, Avda Menendez Pidal s/n, 14004-Cordoba, Spain. mrodriguez@sofia.hrs.sas.cica.es  
SOURCE: Circulation, (11 Dec 2001) Vol. 104, No. 24, pp. 2975-2980.

Refs: 24

ISSN: 0009-7322 CODEN: CIRCAZ

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 009 Surgery  
015 Chest Diseases, Thoracic Surgery and Tuberculosis  
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 10 Jan 2002

Last Updated on STN: 10 Jan 2002

ABSTRACT: Background - Ischemia-reperfusion injury with the resulting inflammatory response is a devastating complication of lung transplantation; much of the tissue damage could be diminished by control of the inflammatory response. Recent studies have show that antithrombin III (AT III) has an anti-inflammatory effect in addition to its established role in the regulation of blood coagulation. Thus, we hypothesized that the administration of AT III might help to prevent ischemia-reperfusion injury after lung transplantation. Methods and Results - The study was performed in a dog model of orthotopic lung transplantation. Dogs were randomly assigned to receive either vehicle (controls) or AT III. We observed that in control dogs, during the 180-minute period after lung transplantation, the arterial O(2) partial pressure decreased and both the alveolar-arterial O(2) difference and the pulmonary vascular resistance increased. By contrast, these parameters remained unchanged in the group of dogs receiving AT III. Dogs with transplants receiving AT III did not show an increase in cell adhesion molecules, and histological examination revealed almost an absence of inflammatory response. The administration of AT III produced a marked increase in serum prostacyclin (PGI(2)) levels, whereas in control dogs, the PGI(2) levels did not change. The beneficial effect of AT III was not observed when dogs received indomethacin to prevent the stimulation of PGI(2) release by AT III. Conclusions - Our results demonstrate that AT III prevents ischemia-reperfusion injury in a dog model of lung transplantation and that this effect is conditioned by an increase in PGI(2) production.

CONTROLLED TERM: Medical Descriptors:  
\*lung transplantation  
\*lung perfusion  
\*ischemia: CO, complication  
\*ischemia: DT, drug therapy  
\*ischemia: PC, prevention  
\*lung disease: CO, complication  
\*lung disease: DT, drug therapy  
\*lung disease: PC, prevention  
reperfusion injury: CO, complication  
reperfusion injury: DT, drug therapy  
reperfusion injury: PC, prevention

arterial oxygen tension  
 lung alveolus  
 lung vascular resistance  
 gas exchange  
 hemodynamics  
 protein expression  
 mononuclear cell  
 nonhuman  
 animal experiment  
 controlled study  
 animal cell  
 article  
 priority journal  
 Drug Descriptors:  
 \*antithrombin III: CB, drug combination  
 \*antithrombin III: DT, drug therapy  
 indometacin: CB, drug combination  
 indometacin: IV, intravenous drug administration  
 cell adhesion molecule: EC, endogenous compound  
 prostaglandin: EC, endogenous compound

CAS REGISTRY NO.: (antithrombin III) 90170-80-2; (indometacin) 53-86-1,  
 74252-25-8, 7681-54-1

COMPANY NAME: Grifols

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ACCESSION NUMBER: 2001202022 EMBASE

TITLE: Mucosal administration of IL-10 enhances oral tolerance in autoimmune encephalomyelitis and diabetes.

AUTHOR: Slavov A.J.; Maron R.; Weiner H.L.

CORPORATE SOURCE: H.L. Weiner, Center for Neurologic Diseases, Brigham and Women's Hospital, Harvard Medical School, 77 Avenue Louis Pasteur, Boston, MA 02115, United States

SOURCE: International Immunology, (2001) Vol. 13, No. 6, pp. 825-833. .

Refs: 59

ISSN: 0953-8178 CODEN: INIMEN

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 003 Endocrinology  
 008 Neurology and Neurosurgery  
 026 Immunology, Serology and Transplantation  
 037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 10 Jul 2001

Last Updated on STN: 10 Jul 2001

ABSTRACT: IL-10 is an immunoregulatory cytokine that can modulate immune processes, inhibiting the expression of inflammatory T(h)1 type responses as well as affecting antigen-presenting cell function. In addition, IL-10 has been shown to be active at mucosal surfaces. In the present study, we examined the role of IL-10 on orally and nasally induced tolerance. Treatment of (PL/J x SJL)F(1) mice with low-dose oral myelin basic protein (MBP) (0.5 mg) and simultaneous oral IL-10 given 3 times reduced the severity and incidence of experimental autoimmune encephalomyelitis (EAE), whereas administration of oral IL-10 alone or MBP alone given in these doses had no effect. Lymphocytes from mice treated orally with MBP and IL-10 proliferated less, and produced decreased amounts of IFN- $\gamma$  and IL-2 and increased amounts of IL-10 and transforming growth factor- $\beta$  upon in vitro stimulation with MBP. Nasal administration of antigen and IL-10 reduced proliferative responses and

IFN- $\gamma$  production, increased IL-10 production, and enhanced protection from EAE. In addition, oral IL-10 combined with oral myelin oligodendrocyte glycoprotein (MOG) 35-55 reduced relapses in MOG-induced EAE in the NOD mouse, as well as enhanced the protective effect of oral insulin in the NOD model of diabetes. These results demonstrate that IL-10 is biologically active at mucosal surfaces and can act synergistically to enhance the tolerogenic effects of mucosally administered antigen.

CONTROLLED TERM: Medical Descriptors:  
 \*allergic encephalomyelitis: DT, drug therapy  
 \*diabetes mellitus: DT, drug therapy  
 drug tolerability  
 immunoregulation  
 mucosa  
 Th1 cell  
 antigen presenting cell  
 cell function  
 dose response  
 disease severity  
 incidence  
 lymphocyte proliferation  
 in vitro study  
 relapse: DT, drug therapy  
 drug activity  
 drug potentiation  
 nonhuman  
 female  
 mouse  
 animal experiment  
 animal model  
 controlled study  
 animal cell  
 article  
 priority journal  
 Drug Descriptors:  
 \*interleukin 10: AD, drug administration  
 \*interleukin 10: CB, drug combination  
 \*interleukin 10: CM, drug comparison  
 \*interleukin 10: IT, drug interaction  
 \*interleukin 10: DT, drug therapy  
 \*interleukin 10: EC, endogenous compound  
 \*interleukin 10: NA, intranasal drug administration  
 \*interleukin 10: PO, oral drug administration  
 cytokine: AD, drug administration  
 cytokine: CB, drug combination  
 cytokine: CM, drug comparison  
 cytokine: IT, drug interaction  
 cytokine: DT, drug therapy  
 cytokine: EC, endogenous compound  
 cytokine: NA, intranasal drug administration  
 cytokine: PO, oral drug administration  
 myelin basic protein: CB, drug combination  
 myelin basic protein: CM, drug comparison  
 myelin basic protein: DO, drug dose  
 myelin basic protein: IT, drug interaction  
 myelin basic protein: DT, drug therapy  
 myelin basic protein: NA, intranasal drug administration  
 myelin basic protein: PO, oral drug administration  
 gamma interferon: EC, endogenous compound  
 interleukin 2: EC, endogenous compound

transforming growth factor alpha: EC, endogenous compound  
 autoantigen: CB, drug combination  
 autoantigen: CM, drug comparison  
 autoantigen: DO, drug dose  
 autoantigen: IT, drug interaction  
 autoantigen: DT, drug therapy  
 autoantigen: NA, intranasal drug administration  
 autoantigen: PO, oral drug administration  
 myelin oligodendrocyte glycoprotein: CB, drug combination  
 myelin oligodendrocyte glycoprotein: IT, drug interaction  
**myelin oligodendrocyte glycoprotein: DT, drug therapy**  
 myelin oligodendrocyte glycoprotein: PO, oral drug administration  
 insulin: CB, drug combination  
 insulin: IT, drug interaction  
 insulin: DT, drug therapy  
 insulin: PO, oral drug administration  
 ovalbumin: CM, drug comparison  
 ovalbumin: PO, oral drug administration  
 CAS REGISTRY NO.: (gamma interferon) 82115-62-6; (interleukin 2) 85898-30-2;  
 (insulin) 9004-10-8; (ovalbumin) 77466-29-6

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ACCESSION NUMBER: 2000400228 EMBASE  
 TITLE: A randomized, double-blind, placebo-controlled trial of a new weight-reducing agent of natural origin.  
 AUTHOR: Thom E.  
 CORPORATE SOURCE: Dr. E. Thom, Parexel Medstat AS, PO Box 210, N-2001 Lillestrom, Norway. erling.thom@parexel.com  
 SOURCE: Journal of International Medical Research, (2000) Vol. 28, No. 5, pp. 229-233. .  
 Refs: 13  
 ISSN: 0300-0605 CODEN: JIMRBV  
 COUNTRY: United Kingdom  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 006 Internal Medicine  
 030 Pharmacology  
 037 Drug Literature Index  
 038 Adverse Reactions Titles  
 039 Pharmacy  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English  
 ENTRY DATE: Entered STN: 13 Dec 2000  
 Last Updated on STN: 13 Dec 2000

ABSTRACT: The efficacy and tolerability of a new weight-reduction agent, based on natural ingredients, was investigated in this randomized, placebo-controlled, double-blind study. The product reduces the absorption of different types of sugar from the gastrointestinal tract. Forty obese volunteers were included in the 12-week study. Body weight, body composition and blood pressure were recorded at baseline and every month during the study. The results show a significant difference in weight reduction in favour of the active group (3.5 kg versus 1.2 kg). Body composition measurements showed that > 85% of the reduction in the active group is fat loss. The tolerability was similar and good in both groups. This product shows promising results and should be studied more extensively at different dose levels.

CONTROLLED TERM: Medical Descriptors:  
 \*weight reduction

**\*obesity: DT, drug therapy**  
drug efficacy  
drug effect  
glucose absorption  
stomach absorption  
intestine absorption  
body weight  
body composition  
blood pressure  
body fat  
drug tolerability  
drug mixture  
drug formulation  
side effect: SI, side effect  
human  
male  
female  
clinical article  
clinical trial  
randomized controlled trial  
double blind procedure  
controlled study  
adult  
article  
Drug Descriptors:  
\*natural product: AE, adverse drug reaction  
\*natural product: CT, clinical trial  
\*natural product: DT, drug therapy  
\*natural product: PR, pharmaceuticals  
\*natural product: PD, pharmacology  
\*natural product: PO, oral drug administration  
\*suco bloc: AE, adverse drug reaction  
\*suco bloc: CT, clinical trial  
\*suco bloc: DT, drug therapy  
\*suco bloc: PR, pharmaceuticals  
\*suco bloc: PD, pharmacology  
\*suco bloc: PO, oral drug administration  
\*antiobesity agent: AE, adverse drug reaction  
\*antiobesity agent: CT, clinical trial  
**\*antiobesity agent: DT, drug therapy**  
\*antiobesity agent: PR, pharmaceuticals  
\*antiobesity agent: PD, pharmacology  
\*antiobesity agent: PO, oral drug administration  
phaseolus vulgaris extract: AE, adverse drug reaction  
phaseolus vulgaris extract: CT, clinical trial  
phaseolus vulgaris extract: CB, drug combination  
phaseolus vulgaris extract: DT, drug therapy  
phaseolus vulgaris extract: PD, pharmacology  
phaseolus vulgaris extract: PO, oral drug administration  
Garcinia cambogia extract: AE, adverse drug reaction  
Garcinia cambogia extract: CT, clinical trial  
Garcinia cambogia extract: CB, drug combination  
Garcinia cambogia extract: DT, drug therapy  
Garcinia cambogia extract: PD, pharmacology  
Garcinia cambogia extract: PO, oral drug administration  
inulin: AE, adverse drug reaction  
inulin: CT, clinical trial  
inulin: CB, drug combination  
inulin: DT, drug therapy  
inulin: PD, pharmacology

inulin: PO, oral drug administration  
 hydroxycitric acid: AE, adverse drug reaction  
 hydroxycitric acid: CT, clinical trial  
 hydroxycitric acid: CB, drug combination  
 hydroxycitric acid: DT, drug therapy  
 hydroxycitric acid: PD, pharmacology  
 hydroxycitric acid: PO, oral drug administration  
 amylase inhibitor: PD, pharmacology  
 glycoprotein: AE, adverse drug reaction  
 glycoprotein: CT, clinical trial  
 glycoprotein: CB, drug combination  
     **glycoprotein: DT, drug therapy**  
     **glycoprotein: PD, pharmacology**  
 glycoprotein: PO, oral drug administration  
 placebo  
 sugar  
 fat  
 glucose  
 amylase: EC, endogenous compound  
 carbohydrate  
 unclassified drug  
 phaseolamin  
 raftiline

CAS REGISTRY NO.: (inulin) 9005-80-5; (hydroxycitric acid) 27750-10-3,  
 6205-14-7; (glucose) 50-99-7, 84778-64-3; (amylase)  
 9000-90-2, 9000-92-4, 9001-19-8  
 CHEMICAL NAME: (1) Suco bloc; (2) Phaseolamin; (3) Raftiline  
 COMPANY NAME: (1) Med Eq (Norway); (2) Leuven Bioproducts (Belgium); (3)  
 Orafti (Belgium)

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ACCESSION NUMBER: 2000306497 EMBASE  
 TITLE: Fruiting body production in basidiomycetes.  
 AUTHOR: Kues U.; Liu Y.  
 CORPORATE SOURCE: U. Kues, ETH Zurich, Institut fur Mikrobiologie,  
 Schmelzbergstrasse 7, 8092 Zurich, Switzerland.  
 kues@microbiol.ethz.ch  
 SOURCE: Applied Microbiology and Biotechnology, (2000) Vol. 54, No.  
 2, pp. 141-152. .  
 Refs: 122  
 ISSN: 0175-7598 CODEN: AMBIDG  
 COUNTRY: Germany  
 DOCUMENT TYPE: Journal; (Short Survey)  
 FILE SEGMENT: 004 Microbiology  
 037 Drug Literature Index  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English  
 ENTRY DATE: Entered STN: 21 Sep 2000  
 Last Updated on STN: 21 Sep 2000

ABSTRACT: Mushroom cultivation presents an economically important  
 biotechnological industry that has markedly expanded all over the world in the  
 past few decades. Mushrooms serve as delicacies for human consumption and as  
 nutraceuticals, as 'food that also cures'. Mushrooms, the fruiting bodies of  
 basidiomycetous fungi, contain substances of various kinds that are highly  
 valued as medicines, flavourings and perfumes. Nevertheless, the biological  
 potential of mushrooms is probably far from exploited. A major problem up to  
 now is that only a few species can be induced to fruit in culture. Our current  
 knowledge on the biological processes of fruiting body initiation and  
 development is limited and arises mostly from studies of selected model

organisms that are accessible to molecular genetics. A better understanding of the developmental processes underlying fruiting in these model organisms is expected to help mushroom cultivation of other basidiomycetes in the future.

CONTROLLED TERM: Medical Descriptors:

\*Basidiomycetes

\*biotechnology

mushroom

food industry

drug industry

agriculture

fungus growth

fungus genetics

drug activity

nonhuman

short survey

Drug Descriptors:

nebularine

illudin M

illudin S

coprine

galectin

flammulin

polyene

lectin

ergosterol

ganoderan A

ganoderan B

ganoderan C

**peptidoglycan**

**grifolan**

lentinan

timonacic

schizophyllan

scleroglucan

2beta,3alpha,9alpha trihydroxy 5alpha ergosta 7,22 diene

steroid

**grifolin**

resorcinol derivative

pachymaran

pachyman

pachymic acid

tumulosic acid

cortinellin

lenzitin

antifungal agent

unindexed drug

unclassified drug

CAS REGISTRY NO.: (nebularine) 550-33-4; (illudin M) 1146-04-9, 19903-66-3;  
(illudin S) 1149-99-1; (coprine) 58919-61-2; (ergosterol)  
23637-22-1, 2418-45-3, 3992-98-1, 57-87-4; (ganoderan A)  
99332-03-3; (ganoderan B) 99332-04-4; (peptidoglycan)  
9047-10-3; (**grifolan**) 104074-36-4; (lentinan)  
37339-90-5; (timonacic) 444-27-9; (schizophyllan)  
9050-67-3; (scleroglucan) 39464-87-4; (pachymaran)  
65637-98-1; (pachyman) 9037-88-1; (pachymic acid)  
29070-92-6

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ACCESSION NUMBER: 1999355784 EMBASE  
TITLE: Von Willebrand factor contained in a high purity FVIII concentrate (Fanhdi®) binds to platelet glycoproteins and supports platelet adhesion to subendothelium under flow conditions.  
AUTHOR: Rivera J.; Escolar G.; Casamiquela R.; Bravo M.I.; Jorquera J.I.; Castillo R.; Ordinas A.; Vicente V.  
CORPORATE SOURCE: Dr. V. Vicente, Centro Regional de Hemodonacion, C/ Ronda de Garay s/n, 30003 Murcia, Spain. wg@fcu.um.es  
SOURCE: Haematologica, (1999) Vol. 84, No. 1, pp. 5-11. .  
Refs: 42  
ISSN: 0390-6078 CODEN: HAEMAX  
COUNTRY: Italy  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 025 Hematology  
037 Drug Literature Index  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ENTRY DATE: Entered STN: 29 Oct 1999  
Last Updated on STN: 29 Oct 1999

ABSTRACT: Background and Objective. There is evidence suggesting that von Willebrand factor (VWF) from high purity factor VIII concentrates could be of clinical use in the management of patients suffering from VWD. We analyzed structural and functional characteristics of VWF present in a high purity factor VIII concentrate VWF(HPC) (Fanhdi®). The multimeric structure, the ability to bind to platelet GP Ib/IX or GP IIb/IIIa, and the capacity of VWF(HPC) to promote platelet adhesion on injured vessels were investigated and compared with that present in standard plasma cryoprecipitates [VWF(CRYO)]. Design and Methods. Binding studies were carried out by incubating radiolabeled VWF and washed platelets, which were activated with either ristocetin (1 mg/mL; for GP Ib/IX), or thrombin (2.5 U/mL; for GP IIb/IIIa). Platelet adhesion was assessed in a perfusion system (shear rate = 800 s<sup>-1</sup>, 10 min) in which the source of VWF was added (at 0.4 or 0.8 U/mL VWF:Ag) to washed platelets and red cells suspended in a human albumin solution. The deposition of platelets onto the perfused subendothelial surface was morphometrically evaluated and expressed as percentage of surface coverage (%SC). Results. The VWF(HPC) (152 Units VWF:RCof/mg protein; VWF:RCof/VWF:Ag = 0.97), lacked only a small proportion of high-molecular-weight multimers present in VWF(CRYO). Binding affinities (Kd values, nM) of VWF(HPC) were similar to those of VWF(CRYO) (5.3±0.86 vs 5.2±0.95, for GP Ib/IX; and 11.6±2.7 vs 15.4±1.7 for GPIIb-IIIa). A slightly, though not significantly, higher binding capacity for these receptors (Bmax values, molecules/pit) was obtained for VWF(HPC). The %SC in perfusions in the presence of albumin was < 10%. Addition of VWFHPC or VWF(CRYO) significantly increased the %SC, with values of 27.1±4.9 and 17.5±2.8%, respectively with 0.4 U/mL (p<0.004 and p<0.02 vs albumin); and 30.8±4.9% and 20.03±4.1%, respectively, at 0.8 U/mL (p<0.001 and p<0.02 vs albumin). Interpretation and Conclusions. Our data show that VWF present in the high purity FVIII concentrate Fanhdi® retains the functional capacity to bind to GPs Ib/IX and IIb/IIIa and to promote platelet adhesion onto exposed subendothelium.

CONTROLLED TERM: Medical Descriptors:  
\*thrombocyte adhesion  
\*vascular endothelium  
\*artery blood flow  
\*drug purity  
shear rate  
hemoperfusion  
morphometrics

cryoprecipitate  
 blood bank  
 rabbit  
 human  
 nonhuman  
 animal experiment  
 controlled study  
 human cell  
 animal cell  
 article  
 Drug Descriptors:  
 \*von willebrand factor  
 \*blood clotting factor 8 concentrate  
 \*thrombin receptor: EC, endogenous compound  
 \*fibrinogen receptor: EC, endogenous compound  
 ristocetin  
 thrombin  
 human albumin

CAS REGISTRY NO.: (von willebrand factor) 109319-16-6; (ristocetin) 11006-74-9, 11140-99-1, 1404-55-3; (thrombin) 9002-04-4  
 CHEMICAL NAME: (1) Fanhdi  
 COMPANY NAME: (1) Grifols (Spain)

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ACCESSION NUMBER: 1999050188 EMBASE  
 TITLE: [Quality control in platelet concentrates: Validation of a new bag type].  
 CONTROLLO DI QUALITA NEI CONCENTRATI PIASTRINICI:  
 VALIDAZIONE DI UN NUOVO TIPO DI SACCA.  
 AUTHOR: Steffan A.; Pradella P.; Abbruzzese L.; De Angelis V.; Cozzi M.R.; De Marco L.  
 CORPORATE SOURCE: Dr. A. Steffan, Serv. Immunotrasfusionale Anal. Clin, IRCCS Centro di Riferimento Oncol., 33081 Aviano Pn, Italy  
 SOURCE: Trasfusione del Sangue, (1998) Vol. 43, No. 6, pp. 345-350.

Refs: 17  
 ISSN: 0041-1787 CODEN: TRSABD

COUNTRY: Italy  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 025 Hematology  
 027 Biophysics, Bioengineering and Medical Instrumentation

LANGUAGE: Italian  
 SUMMARY LANGUAGE: English; Italian  
 ENTRY DATE: Entered STN: 4 Mar 1999  
 Last Updated on STN: 4 Mar 1999

ABSTRACT: The yield and the post-transfusion recovery of random platelet concentrates (PC) are influenced by several variables. Platelet activation and damage of membrane associated receptorial complexes may occur during the preparation of platelet concentrate; during storage, serial changes in platelet ultrastructure, physicochemical and membrane properties occur; physico-chemical properties of the blood bags in which platelets are stored may variably affect either platelet preparation or storage. Therefore, the validation of any new plastic container for PC is based on data of quality control of the preparation and storage of platelet, which must explore at least membrane \*\*\*glycoprotein\*\*\* (GP) expression and function, the appearance of platelet activation and lysis markers. The integrity of the GPIb-IX and GPIIb-IIIa complexes (which act as receptor for von Willebrand factor, fibrinogen and other adhesive proteins), is required for the haemostatic efficiency of

platelet. The membrane expression of P-selectin, an adhesion molecule, in the selectin family, which is normally located inside the  $\alpha$ granule membrane of the platelet, is considered a reliable index of platelet activation. The loss of membrane GPIb can be studied by monitoring the progressive increase in the supernatant of glyocalicin (GC), which is its 45 Kd aminoterminal portion. We studied the characteristics of platelet preparation (15 PC) and storage in a new bag for PC (manufactured by **Grifols** Laboratories, Murcia, Spain) which is specially intended to maintain oxygen content and pH and to minimize the release of plastic components. At the time of preparation and during an extended storage (up to 7 days), we have explored the above mentioned platelet properties, in a quality control program, which includes also control procedures routinely performed at our Blood Bank for PC preparation and storage (lactate dehydrogenase, pH, platelet and leucocyte count). As control, we have evaluated 15 platelet concentrates separated and stored in Fenwal (PL1240) bags. The expression of GPIIb-IIIa seems to be unmodified, while a higher decrease of GPIb and a higher increase of GC value have been noticed in Fenwal as compared to **Grifols** bags. Moreover, a better pH maintenance (never lower than 6.8 during storage) and lower activation indexes (P-selectin, GC) characterize PC stored in **Grifols** bags. We conclude that the new oxygen-permeable **Grifols** bag shows platelet quality at least comparable to the conventional bags intended for prolonged platelet storage.

CONTROLLED TERM: Medical Descriptors:  
 \*thrombocyte transfusion  
 \*thrombocyte preservation  
 health care quality  
 health care delivery  
 quality control  
 validation process  
 instrumentation  
 protein expression  
 blood bank  
 human  
 article  
 Drug Descriptors:  
 \*thrombocyte concentrate  
 PADGEM protein: EC, endogenous compound  
 selectin: EC, endogenous compound  
 glyocalicin: EC, endogenous compound  
 COMPANY NAME: **Grifols** (Spain)

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ACCESSION NUMBER: 96297308 EMBASE  
 DOCUMENT NUMBER: 1996297308  
 TITLE: Prevention of diabetes in the non-obese diabetic mouse by oral immunological treatments. Comparative efficiency of human insulin and two bacterial antigens, lipopolysaccharide from *Escherichia coli* and glycoprotein extract from *Klebsiella pneumoniae*.  
 AUTHOR: Sai P.; Rivereau A.S.  
 CORPORATE SOURCE: Immuno-Endocrinology, ENVN, Route de Gachet, CP 3013,44087 Nantes Cedex 03, France  
 SOURCE: Diabetes and Metabolism, (1996) Vol. 22, No. 5, pp. 341-348. .  
 ISSN: 0338-1684 CODEN: DIMEFW  
 COUNTRY: France  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 004 Microbiology

005 General Pathology and Pathological Anatomy  
006 Internal Medicine  
026 Immunology, Serology and Transplantation  
052 Toxicology  
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English; French

ENTRY DATE: Entered STN: 12 Nov 1996

Last Updated on STN: 12 Nov 1996

**ABSTRACT:** As oral administration of insulin reduces the incidence of diabetes in NOD mice, and to achieve a better approximation of oral insulin trials being developed for human studies which will use human insulin, we attempted to determine the preventive efficacy of oral administration of human insulin rather than resorting to the animal insulins used in previous studies. As the strength of prevention obtained by oral insulin has not been adequately demonstrated, we determined whether the protection persisted after the oral treatment was discontinued and whether it was resistant to a diabetogenic injection of cyclophosphamide (CY). We also determined whether the effect of insulin could be increased by oral administration of lipopolysaccharide from *Escherichia coli* (LPS) or another immunostimulant (glycoprotein extracts from *Klebsiella pneumoniae*, GEKP) which may be more feasible for human application. Female NOD mice were fed once a week (from 35 to 300 days of age) with insulin, LPS, GEKP, insulin plus LPS, insulin plus GEKP, or PBS. A decreased incidence of diabetes was observed in animals fed human insulin ( $p < 0.01$  incidence of diabetes at 300 days of age: 31% in mice fed with insulin and 65% in those fed PBS). Prevention by insulin was not enhanced by oral LPS or GEKP. Yet unexpectedly, mice fed with LPS alone or GEKP alone displayed decreases in diabetes incidence ( $p < 0.01$ ). The severity of insulinitis was reduced in animals fed insulin, LPS, GEKP or combinations of insulin and either immunostimulant ( $p < 0.02$ ). Although the oral treatments were stopped at 300 days of age, the incidence of diabetes at 360 days remained lower in mice previously fed insulin, LPS, GEKP or combinations of insulin and either immunostimulant ( $p < 0.01$ ). In mice previously fed PBS, CY injection (60 days after withdrawal of the oral treatment) led to a final incidence of diabetes of 90% (sum of the incidence during the initial 360 days and the further CY-induced incidence). Previous feedings with insulin, LPS, GEKP or combinations of insulin and either immunostimulant did not protect against CY-induced diabetes since incidences reached the final control incidence. T splenocytes from animals fed insulin, LPS, or GEKP, similarly reduced the capacity of T cells from diabetic mice to transfer the disease ( $p < 0.01$ ). It is concluded that oral treatment with human insulin to be used in human trials reduces the incidence of diabetes in NOD mice. Equivalent preventive efficacy was obtained through feedings with LPS or GEKP (even though no cumulative efficiency was observed with insulin). The latter results suggest that it would be advisable to evaluate the efficiency of oral bacterial antigens for the prevention of human Type 1 diabetes. The protection afforded by oral treatments with insulin or bacterial antigens may be attributed to cellular suppression, persists for some time after treatments are stopped, but is not resistant to major immune stimulation such as injection of CY.

**CONTROLLED TERM:** Medical Descriptors:  
\*diabetes mellitus: ET, etiology  
\*diabetes mellitus: PC, prevention  
\*diabetes mellitus: DT, drug therapy  
\*diabetes mellitus: EP, epidemiology  
animal experiment  
animal model  
article  
controlled study  
female

mouse  
 nonhuman  
 oral drug administration  
 subcutaneous drug administration  
 Drug Descriptors:  
 \*biostim: DT, drug therapy  
 \*biostim: CB, drug combination  
 \*biostim: CM, drug comparison  
 \*biostim: PD, pharmacology  
 \*escherichia coli lipopolysaccharide: PD, pharmacology  
 \*escherichia coli lipopolysaccharide: CM, drug comparison  
 \*escherichia coli lipopolysaccharide: DT, drug therapy  
 \*escherichia coli lipopolysaccharide: CB, drug combination  
 \*immunostimulating agent: DT, drug therapy  
 \*immunostimulating agent: CB, drug combination  
 \*immunostimulating agent: CM, drug comparison  
 \*immunostimulating agent: PD, pharmacology  
 \*insulin: PD, pharmacology  
 \*insulin: CM, drug comparison  
 \*insulin: AD, drug administration  
 \*insulin: DT, drug therapy  
 \*insulin: CB, drug combination  
 \*klebsiella pneumoniae glycoprotein: PD,  
 pharmacology  
 \*klebsiella pneumoniae glycoprotein: DT, drug  
 therapy  
 \*klebsiella pneumoniae glycoprotein: CB, drug combination  
 \*klebsiella pneumoniae glycoprotein: CM, drug comparison  
 cyclophosphamide: TO, drug toxicity  
 unclassified drug  
 CAS REGISTRY NO.: (biostim) 68583-24-4; (insulin) 9004-10-8;  
 (cyclophosphamide) 50-18-0  
 CHEMICAL NAME: (1) Biostim; (2) Endoxan  
 COMPANY NAME: (1) Cassenne (France); (2) Astra (France); Sigma (United  
 States); Lilly

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ACCESSION NUMBER: 94041403 EMBASE  
 DOCUMENT NUMBER: 1994041403  
 TITLE: Peptide-induced T-cell tolerance to prevent autoimmune diabetes in a transgenic mouse model.  
 AUTHOR: Aichele P.; Kyburz D.; Ohashi P.S.; Odermatt B.; Zinkernagel R.M.; Hengartner H.; Pircher H.  
 CORPORATE SOURCE: Department of Medical Biophysics, Ontario Cancer Institute, 500 Sherbourne Street, Toronto, Ont. M4X 1K9, Canada  
 SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1994) Vol. 91, No. 2, pp. 444-448. .  
 ISSN: 0027-8424 CODEN: PNASA6  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 003 Endocrinology  
 004 Microbiology  
 026 Immunology, Serology and Transplantation  
 037 Drug Literature Index  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English  
 ENTRY DATE: Entered STN: 27 Feb 1994  
 Last Updated on STN: 27 Feb 1994

**ABSTRACT:** A synthetic peptide corresponding to an immunodominant epitope of lymphocytic choriomeningitis virus glycoprotein (LCMV GP) was used to prime or to tolerize CD8+ T cells in vivo, dependent on mode of immunization. Peptide-specific tolerance was then examined in transgenic mice expressing LCMV GP in the  $\beta$  islet cells of the pancreas; these mice develop CD8+ T-cell-mediated diabetes within 8-14 days after LCMV infection. Specific peptide-induced tolerance prevented autoimmune destruction of  $\beta$  islet cells and diabetes in this transgenic mouse model.

**CONTROLLED TERM:** Medical Descriptors:  
 \*autoimmunity  
 \*diabetes mellitus: PC, prevention  
 \*diabetes mellitus: ET, etiology  
 \*diabetes mellitus: DT, drug therapy  
 \*immunological tolerance  
 animal model  
 animal tissue  
 article  
 controlled study  
 cytotoxic t lymphocyte  
 immunization  
 intraperitoneal drug administration  
 lymphocytic choriomeningitis virus  
 nonhuman  
 pancreas islet beta cell  
 priority journal  
 subcutaneous drug administration  
 transgenic mouse  
 drug therapy  
 etiology  
 prevention  
 Drug Descriptors:  
 \*synthetic peptide: DT, drug therapy  
 \*virus glycoprotein: DT, drug therapy  
 cd8 antigen: EC, endogenous compound  
 epitope  
 freund adjuvant  
 glucose: EC, endogenous compound  
**CAS REGISTRY NO.:** (freund adjuvant) 9007-81-2; (glucose) 50-99-7, 84778-64-3

L173 ANSWER 99 OF 99 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN  
**ACCESSION NUMBER:** 94041401 EMBASE  
**DOCUMENT NUMBER:** 1994041401  
**TITLE:** Antigen-specific immunotherapy: Is it a real possibility to combat T- cell-mediated autoimmunity?.  
**AUTHOR:** Tisch R.; McDevitt H.O.  
**CORPORATE SOURCE:** Department of Microbiology, Stanford University Medical Center, Stanford, CA 94305-5402, United States  
**SOURCE:** Proceedings of the National Academy of Sciences of the United States of America, (1994) Vol. 91, No. 2, pp. 437-438. .  
 ISSN: 0027-8424 CODEN: PNASA6  
**COUNTRY:** United States  
**DOCUMENT TYPE:** Journal; Note  
**FILE SEGMENT:** 026 Immunology, Serology and Transplantation  
 037 Drug Literature Index  
**LANGUAGE:** English  
**ENTRY DATE:** Entered STN: 27 Feb 1994  
 Last Updated on STN: 27 Feb 1994

CONTROLLED TERM: Medical Descriptors:

- \*autoimmunity
- \*cellular immunity
- \*immunotherapy
- allergic encephalitis: TH, therapy
- allergic encephalitis: PC, prevention
- allergic encephalitis: ET, etiology
- allergic encephalitis: DT, drug therapy
- antigen recognition
- antigen specificity
- human
- immunological tolerance
- inhalational drug administration
- insulin dependent diabetes mellitus: ET, etiology
- insulin dependent diabetes mellitus: DT, drug therapy**
- insulin dependent diabetes mellitus: PC, prevention
- insulin dependent diabetes mellitus: TH, therapy
- intraperitoneal drug administration
- lymphocytic choriomeningitis virus
- multiple sclerosis: ET, etiology
- multiple sclerosis: TH, therapy
- multiple sclerosis: DT, drug therapy
- nonhuman
- note
- oral drug administration
- priority journal
- rheumatoid arthritis: TH, therapy
- rheumatoid arthritis: ET, etiology
- rheumatoid arthritis: DT, drug therapy
- drug therapy
- etiology
- prevention
- therapy
- Drug Descriptors:
- \*autoantigen: EC, endogenous compound
- \*glutamate decarboxylase: DT, drug therapy
- \*myelin basic protein: DT, drug therapy
- \*virus glycoprotein: DT, drug therapy**
- cd4 antigen: EC, endogenous compound
- cd8 antigen: EC, endogenous compound
- collagen type 2: DT, drug therapy
- epitope
- interleukin 10
- interleukin 4
- transforming growth factor beta

CAS REGISTRY NO.: (glutamate decarboxylase) 9024-58-2

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